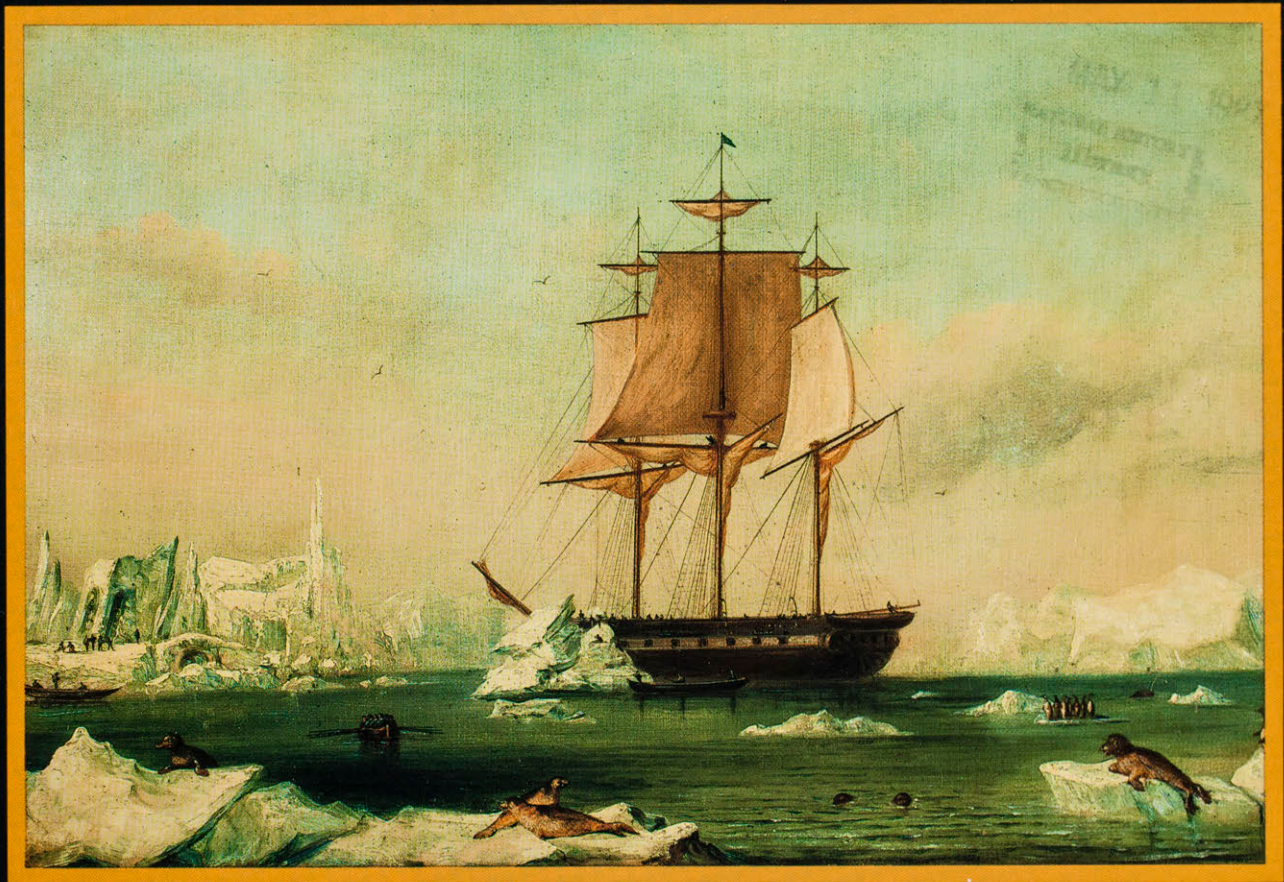


TERRA

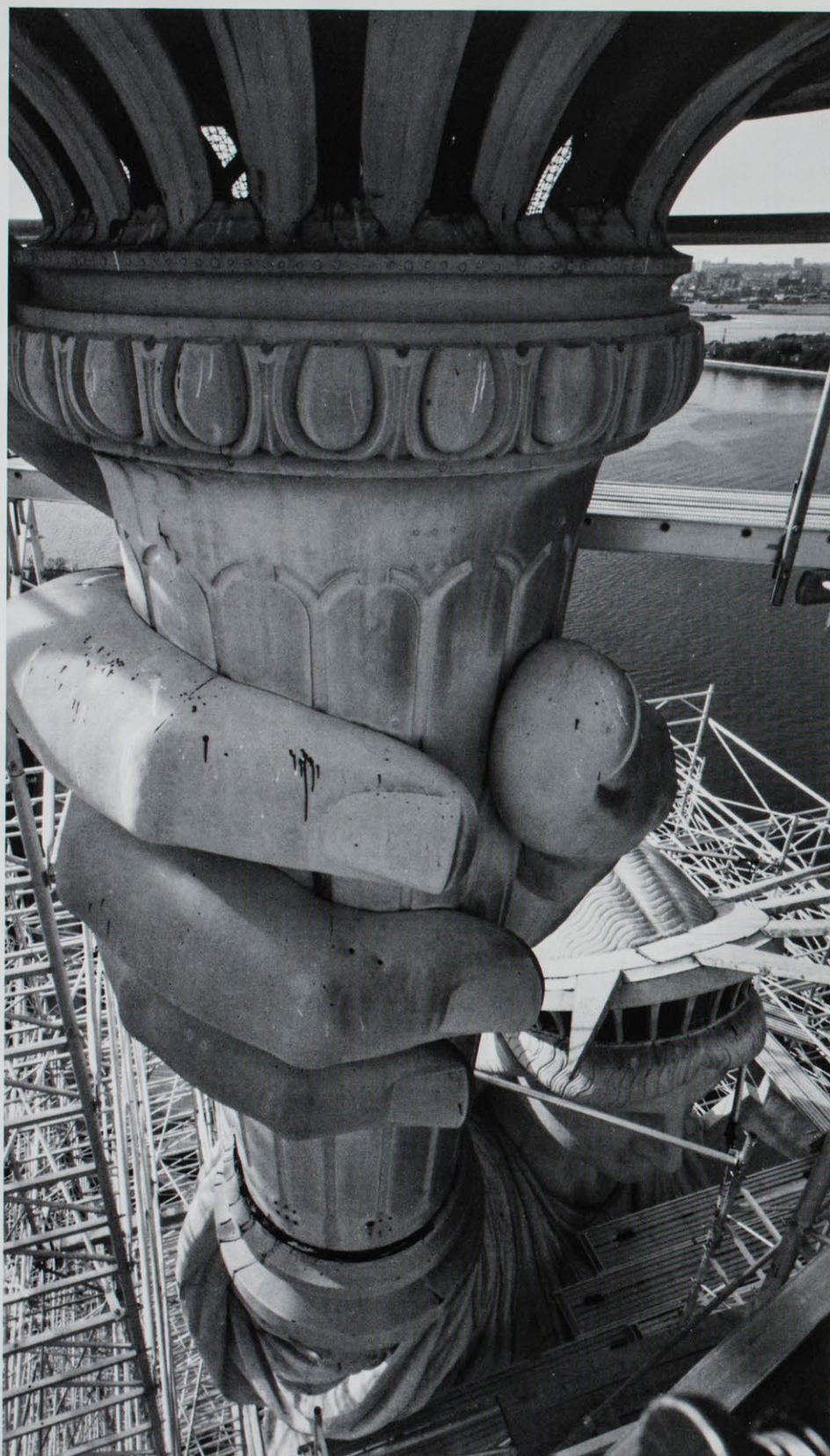
THE NATURAL HISTORY MUSEUM OF LOS ANGELES COUNTY

VOL. 25, NO. 5 • MAY / JUNE 1987



MAGNIFICENT VOYAGERS

The U.S. Exploring Expedition
of 1838-42



This 1985 photograph depicts the hand and torch of the Statue of Liberty surrounded by scaffolding while in the midst of restoration. Liberty: The French-American Statue in Art and History, an exhibit celebrating the centennial and the restoration of the colossal statue, will be on display in the Natural History Museum's Rotunda from May 13 through June 26, 1987.

BOARD OF
TRUSTEES OF
THE NATURAL
HISTORY
MUSEUM
FOUNDATION

Robert S. Attiyeh
President
Leslie C. Curtis, Jr.
Vice President
Mrs. Justin Dart*
Vice President
William A. Mingst
Vice President
Stephen R. Onderdonk
Vice President
Charles O. Parker II
Vice President
Richard C. Seaver
Treasurer
Dr. M. Norvel Young*
Secretary
Richard Call, M.D.*
Assistant Secretary
Alex W. Hart
Assistant Treasurer
Ed N. Harrison*
President, Board of Governors
Robert V. Adams
James K. Agnew
Mrs. Jane Boeckmann*
F. Otis Booth, Jr.*
Judge William Matthew Byrne, Jr.
George V. Caldwell
Otis Chandler
H. Frederick Christie
David Comsky*
Camron Cooper
Mrs. Arthur L. Crowe
A. Frederick Gerstell
Frederic E. Giersch, Jr.*
Albert B. Glickman
Mrs. Stephen E. Griffith
John F. Harrigan
Mrs. Robert R. Hollman*
Ivan J. Houston*
Ray R. Irani
Mrs. Robert G. Irvin*
Linda Dyer Knight
Dan L. McGurk
G. Everett Miller
Robert P. Miller, Jr.
George C. Page
Robert E. Petersen
Mrs. Thomas Reddin
Susan F. Rice
Richard J. Riordan
Nelson C. Rising
Marc A. Seidner*
Mynatt Smith*
Mrs. James Stewart
Mrs. Franz Talley
C. B. Thornton, Jr.
Richard S. Volpert*
John G. Wigmore*
Gin D. Wong
James R. Young
Evelle J. Younger*

*Governor

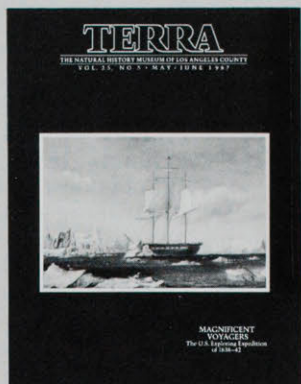
ALLIANCE
BOARD OF
DIRECTORS

Mrs. Thomas Reddin
Chairman
Robert S. Attiyeh
William J. Bird
Neal H. Brockmeyer
Mrs. Francis L. Dale
Mrs. C. Warren Driver
J. Shelton Ellis, Jr.
Mrs. Robert Feinerman
Dr. Herbert Friedmann
Gregg Gann
Judge Ronald M. George
Mrs. Allan M. Herbert
Dr. Patricia House
Marshall Kass
Mrs. David Jacobs
Mrs. Eugene Kramer
Carole Sumner Krechman
Mrs. Kenneth Leventhal
Ernest M. Lever
Marvin H. Lewis
Mrs. Hugh Logan
Alan G. Lowy
Douglas J. Macdonald
Mrs. Maurice Machris
Ray McCullough
John L. Meek
William A. Mingst
Dr. Elliot Mininberg
Mrs. Roy Nutt
A. F. Osterloh III
Robert Patterson
Mrs. Dan Pocapalia
Sheldon Richman
Mrs. Charles Rinsch
Mrs. Charles E. Ryker
Cy Schneider
Mrs. Leon I. Singer
Mrs. Irving Stone
Harry H. Tytle
Mrs. Dwight Vedder
Frank J. Vodhanel
Lorraine P. Young

TERRA

THE MEMBERS' MAGAZINE
OF THE NATURAL HISTORY MUSEUM
OF LOS ANGELES COUNTY
AND THE PAGE MUSEUM
OF LA BREA DISCOVERIES

VOL. 25, NO. 5 • MAY/JUNE 1987



COVER: The U.S. Exploring Expedition, commanded by Charles Wilkes, set sail in August 1838. Shown here in Antarctica is the U.S.S. *Vincennes*, the expedition's flagship. The painting is attributed to Wilkes. Courtesy Peabody Museum of Salem, photograph by Mark Sexton.

**LOS ANGELES COUNTY
BOARD OF SUPERVISORS**
Michael D. Antonovich, Chairman,
Fifth District
Peter F. Schabaram, First District
Kenneth Hahn, Second District
Edmund D. Edelman, Third District
Deane Dana, Fourth District

EDITOR

Robin A. Simpson

ASSOCIATE EDITORS

Harry J. Pack/Kathy Talley-Jones

DESIGN

Armin Krumbach

MUSEUM PHOTOGRAPHERS

Dick Meier/John De Leon/Don Meyer

EDITORIAL BOARD

Craig C. Black/
Greg P. Byrd/Daniel M. Cohen/
Joan Grasty/John M. Harris/Peter C. Keller/
Harry Kelsey/William A. Mingst/Harry J. Pack/
Robin A. Simpson

ADVERTISING SALES REPRESENTATIVES

Heide Thorstenson/Bernadette Lynch
50 West Hillcrest Drive, Suite 215
Thousand Oaks, CA 91360
Telephone: 805/496-3500
Telex: 182640 WKVG

TERRA is published bimonthly by the Natural History Museum of Los Angeles County and is sent as a benefit to museum members. Single copy price: \$2.50. Subscriptions: \$12 per year. For membership information, visit the Membership Office at the Natural History Museum or call 213/744-3426. All other inquiries can be referred to the Publications Office, Natural History Museum, 900 Exposition Boulevard, Los Angeles, CA 90007. Printed by North Hollywood Printing Co., Inc. Color separations by Computer Color Corp. Typography by RS Typographics. All Rights Reserved. Reproduction in whole or in part without permission is prohibited. ISSN 0040-3733

CONTENTS

Museum on the Move 4



Magnificent Voyagers:
The Story of the
U.S. Exploring
Expedition, 1838-42,
Part I

by Herman J. Viola 7



Gold:
Old World Riches,
New World Symbols

by Bruce Owen 15



The Art of
Biological Illustration:
The Work of
Frances Runyan

19



Eclecticism and
the Well-Dressed
Green

by William Breen 21

Book Reviews 29



George C. Page. Photograph courtesy of Beverly Hills [213].

George C. Page Recognized at 1987 Dinosaur Ball. The Golden Edition of the museum's gala Dinosaur Ball, held on March 28, provided an apt occasion to recognize George C. Page for his many contributions to the Natural History Museum, because this year coincidentally marks the tenth anniversary of the George C. Page Museum of La Brea Discoveries.

As Dr. Craig Black, Director of the museum, noted in his welcome to guests at the ball: "This affiliate of the Natural History Museum has informed and delighted over 5 million people since George Page pursued his dream to build a showcase for the relics of Ice Age mammoths, saber-toothed cats, and sloths that roamed Rancho La Brea 40,000 years ago. Out of that dream came a unique museum—a place where the public can

observe paleontology at work, from excavation and recovery through preparation and storage of the fossils."

With characteristic generosity, Mr. Page also provided major underwriting for the 1987 Dinosaur Ball. His gift, like the contributions of all those who enjoyed the elegant evening, benefits the museum's special exhibitions program and the rich array of educational activities the museum offers to children and adults. Each year the ball raises over \$180,000 toward the museum's \$1.4 million Annual Fund, which supports these ongoing public programs.

ARCO and Occidental Petroleum Support Magnificent Voyagers. ARCO and Occidental Petroleum Charitable Foundation are jointly supporting Magnificent Voyagers: The U.S. Exploring Expedition, 1838–1842, which will be on exhibit at the Natural History Museum from June 6 to August 30, 1987.

Because these two oil corporations are committed to the advancement of education as well as basic scientific research—one of the principal missions of the original U.S. Exploring Expedition—they share an interest in the theme of exploration. Moreover, the exhibition was originally funded at the Smithsonian in part by a generous grant from the Atlantic Richfield Foundation, and ARCO's support of the exhibit's presentation at the Natural History Museum will help bring the display to the corporation's home town.

This fascinating exhibition has an unusually wide appeal: it combines authentically stirring adventure, an enduring legacy of scientific and maritime accomplishment, and a glimpse of an exotic world on the verge of vanishing under the press of trade, missionary zeal, and international diplomacy. For more information on Magnificent Voyagers, please call 213/744-3466.

Gold Show Attracts Sponsors. Gold: The Quest for New World Riches, a major exhibition of priceless gold artifacts, exquisite jewelry, giant nuggets, rare coins, and other alluring objects, has received contributions from a variety of sponsors with an interest—whether metaphorical or actual—in the prized metal. Major support was provided by The Gold Card Division of American Express Travel Related Services Co., Inc., and the Precious Metals Investment

Group, a Division of Security Pacific National Bank; additional funding was supplied by Homestake Mining Company and Monex International; and travel arrangements were made possible by Avianca Airlines. Together these contributors have enabled the Natural History Museum to present an exhibition that explores the natural beauty of gold, its role in world conquest and economic growth, and its powerful symbolic value. The exhibition will continue through May 17; for information regarding tickets to this special exhibition and accompanying public programs, please telephone 213/744-6292.

Foundation Board of Trustees Welcomes Vice President of Atlantic Richfield. Camron Cooper, Vice President and Treasurer of Atlantic Richfield, was elected to the Natural History Museum Foundation Board of Trustees at its December meeting.

Ms. Cooper will bring to the board wide expertise in her field and an abiding commitment to the enhancement of life in southern California. She was appointed Treasurer of Atlantic Richfield Company in October 1978 and elected Vice President in May 1983. She holds direct responsibility for corporate banking and money market activities, long-term financing, credit, international financial concerns, and insurance risk management. Before joining Atlantic Richfield in 1974 as Manager of Investor Relations, she spent fourteen years in the securities business with such firms as Smith Barney & Company, Hornblower & Weeks, and Loeb Rhoades.

A native of California, Cooper graduated from Stanford University with a degree in Economics. She is a director of Inland Steel Company, Pacific American Income Shares, Inc., and The Seaver Institute. She also serves on the Board of Trustees of the Greater Los Angeles Zoo Association and is a member of the Board of Governors of the National Conference of Christians and Jews in Southern California.

Trustees provide direction for the museum's long-range programs and oversight for its operations, ensuring its continuing financial well-being. As community leaders, they also create a bridge between the southern California public and the scientific, educational, and exhibition activities of the Natural History Museum.

Continued on page 6

Olympians compete for it. Civilizations were founded on it. Mayans worshipped it. Gold.

**The Gold Card® Division of American Express
proudly announces its sponsorship of**
Gold: The Quest For New World Riches
At The Natural History Museum of Los Angeles County
March 7 to May 17†

Glistening pre-Columbian artifacts. Glittering treasures from sunken Spanish galleons. Exquisite jewelry. Brilliant trophies and medals. Shimmering coins and bullion. Magnificent nuggets.

These are merely a part of one of the finest, most complete exhibitions ever devoted to the world's most precious of precious metals: Gold.

And the Gold Card Division of American Express Travel Related Services Company, Inc. is especially proud to help support this remarkable display.

In fact, as an added gesture to honor this extraordinary exhibition, we'll contribute ten dollars to the museum for every approved Gold Card application* received in the Los Angeles area through May 1987.

Which proves, once again, that the Gold Card lives up to its name.

Tickets are available through TicketMaster
(213) 480-3232.

THE GOLD CARD®



† For information on the exhibit call (213) 744-6292.

*From Take One displays in fine service establishments and financial institutions.

Museum Fellows View Private Collection. Fellows of the Natural History Museum recently enjoyed a private viewing of eighteenth- and nineteenth-century American and English decorative arts at the home of a distinguished southern California collector. After a champagne reception and a welcome by Dr. Craig Black, Director of the museum, the collector presented many notable objects, including a trove of exquisite silver ornaments. The evening was an enticing preview of the kinds of artifacts that will be displayed in the exhibit *Silver in the Golden State*, on view at the museum from August 15 through November 2, 1987.

The Fellows are a group of community leaders who contribute \$1,000 or more to the museum's Annual Fund to benefit the museum's special exhibitions and the lectures, seminars, workshops, and classes it offers throughout the year to children and adults. By so doing the Fellows demonstrate their recognition that the museum is a unique resource serving all sectors of southern California. Their active and generous support exemplifies the personal commitment so vital to the continuing well-being of the museum and serves to encourage others to invest in its cultural and educational programs.

"While the primary goal of the Fellows is to express a sense of civic pride and responsibility," says Kathleen Rydar, Vice President of the Natural History Museum Foundation, "these important friends of the museum also have many opportunities to pursue intellectual and cultural interests and to develop enduring associations within the group. As guests of the museum's Director, they are invited to private exhibition openings, special visits to the homes of important Los Angeles collectors, and behind-the-scenes tours of the museum's permanent holdings." In addition, they receive other attractive benefits:

- VIP tickets admitting Fellows and their guests to special exhibitions at any time during regular hours.
- Private tours of any part of the museum under the guidance of a staff member or docent.
- Preferred parking for Coliseum and Sports Arena events.
- Use of museum facilities by arrangement for private or corporate events.
- Fellows' names inscribed on a hand-

some plaque at the museum's north entrance.

- All benefits of museum membership, including a year's subscription to *TERRA* magazine, free family admission to the Natural History and Page museums, and discounts in museum shops and bookstores.

For further information regarding the advantages of becoming a Fellow of the museum, contact Kathleen Rydar at 213/744-3307.

Current Fellows

Mr. Arthur R. Adams
Mr. & Mrs. Gosta I. Ahlen
The Albertson Foundation
Mrs. Anna Bing Arnold
Mr. & Mrs. Thomas Asher
Mr. & Mrs. Robert S. Attiye
Autry Foundation
Mr. & Mrs. R. Stanton Avery
Mr. & Mrs. Guilford Babcock
Dr. Walter F. Bauer
Mr. & Mrs. Gordon Behn
Mrs. Iona Benson
Mr. & Mrs. Walter S. Berkman
Mr. & Mrs. William J. Bird
Mr. & Mrs. F. Otis Booth, Jr.
Mr. & Mrs. Neal Brockmeyer
Mrs. Ralph V. Byrne
Dr. & Mrs. Richard Call
Mr. & Mrs. Richard P. Carlsberg
Mr. & Mrs. Edward M. Carson
Mr. & Mrs. H. Frederick Christie
Mr. & Mrs. John D. Clark
Mrs. John Brown Cook
Ms. Camron Cooper
Mr. Gordon B. Crary, Jr.
Mr. & Mrs. Arthur L. Crowe
Mr. Leslie C. Curtis, Jr.
Mr. & Mrs. Francis L. Dale
Mrs. Justin Dart
John F. Daum & Mary D. Nichols
Mrs. Susana B. Davidson
Mr. Robert S. Dickerman
Mr. & Mrs. Patrick Doheny
Mr. William H. Doheny
Mr. & Mrs. William W. Drewry, Jr.
Mr. & Mrs. C. Warren Driver
Mr. & Mrs. James G. Duff, Jr.
Mr. & Mrs. John K. Duncan
Mr. James Easton
Mr. J. Shelton Ellis, Jr.
Mr. & Mrs. Alfred Firestein
Mr. Walter G. Franz, Jr.
Dr. Jesse Garber
Mr. & Mrs. Barry W. Gernstein³
Mr. & Mrs. A. Frederic Gerstell
Mr. & Mrs. Frederick E. Giersch, Jr.
Mr. & Mrs. Albert B. Glickman³
Mr. Bill Goodan
Mr. & Mrs. Stephen E. Griffith
Mr. & Mrs. Henry S. Grossman
Mrs. Florence Hamilton²
Mr. & Mrs. John Hancock

Mr. & Mrs. Robert A. Hansen
Mr. H. Lyn Hardman
Mr. John Harrigan
Mr. & Mrs. Ed N. Harrsion
Mr. Alex W. Hart
Mr. & Mrs. Fred L. Hartley
Mr. & Mrs. Allan Herbert
Mr. & Mrs. Mike Hollander
Deloris Hollman
Drs. John & Patricia House
Mr. & Mrs. Robert G. Irvin³
Elaine F. Irvine
Mr. & Mrs. David Jacobs²
Mr. & Mrs. Melvin Jacobs
Mr. & Mrs. Marshall I. Kass
Dr. & Mrs. Lindbergh Kawahara
Evelyn & Irving Kellogg Foundation Inc.
Mr. & Mrs. David C. Knight
Mr. & Mrs. Howard M. Koff
Carol Sumner Krechman
Mr. & Mrs. Kenneth Leventhal
Mr. & Mrs. Ernest Lever
Mr. & Mrs. Marvin Lewis
Mr. Randall W. Lewis
Mr. Hugh H. Logan
Mr. & Mrs. Dennis H. Lowe
Mr. Alan G. Lowy
Mr. & Mrs. Terence D. Lynch
Mrs. Maurice Machris
Mr. & Mrs. Norman A. MacLeod
Mrs. James H. McCarthy
Mr. & Mrs. J. Thomas McCarthy
Mr. & Mrs. Ray T. McCullough
Mr. & Mrs. Dan L. McGurk
Mr. & Mrs. John L. Meek
Dr. & Mrs. Robert Mendez
Dr. & Mrs. Joseph P. Messler
Mr. & Mrs. G. Everett Miller
Mr. & Mrs. W. Owens Miller
Mr. & Mrs. Robert P. Miller, Jr.
Mr. & Mrs. William A. Mingst
Mr. & Mrs. Owen R. Mock
Mr. & Mrs. Henry F. Moon
Anne Marie Moses
Mr. & Mrs. Robert Motley
Mrs. Fred Nason
Mr. & Mrs. Roy Nutt
Mr. & Mrs. Stephen Onderdonk
Mr. A. F. Osterloh III
Mr. George C. Page¹
Ms. Joan Palevsky
Mr. & Mrs. Charles O. Parker II
Mr. & Mrs. Owen B. Patotzka
Suzanne Peck
Mr. & Mrs. Joseph A. Pelezzare
Thomas Pietrocari
Thomas & Elizabeth Plott
Mr. & Mrs. Dan Pocapalia²
Dr. Joseph & Helene Pollock
Mr. & Mrs. Thomas Reddin
Ms. Susan F. Rice
Mrs. Gordon Richardson
Mr. & Mrs. Sheldon Richman
Mr. & Mrs. Charles E. Rinsch
Mr. & Mrs. Nelson Rising
Mr. Robert P. Rosenberg
Kathleen L. Rydar

¹ Director's Council

² Curator's Circle

³ Sustaining Member

Continued on page 28

MAGNIFICENT VOYAGERS

The Story of the U.S. Exploring Expedition, 1838-42, Part I

by HERMAN J. VIOLA



John Cleves Symmes, Jr., was an early and enthusiastic supporter of the expedition, which he hoped would prove his bizarre theory that the earth was hollow. Drawn by John J. Audubon. Courtesy The New-York Historical Society.

Few sagas of the sea embody more romance and adventure than the U.S. Exploring Expedition of 1838-42 led by Lieutenant Charles Wilkes. The history of the voyage evokes the glorious age of sail—a time when iron men in wooden ships ventured forth upon the sea, confident that wind, weather, and wits would see them safely home.

Certainly, the Expedition's accomplishments were heroic. In less than four years, this gallant naval squadron of six small ships surveyed 280 islands and constructed 180 charts, some of which were still being used as late as World War II. The Expedition mapped eight hundred miles of the coast of the Oregon territory; it explored some fifteen hundred miles of the Antarctic coast, thereby proving the existence of the seventh continent. Equally important, the Expedition collected and described natural history specimens from all parts of the globe—specimens that eventually came to the fledgling Smithsonian Institution, making it the National Museum of the United States. In a larger sense, the Expedition led to the emergence of the United States as a naval and scientific power with worldwide interests.

Despite its historical importance, the Expedition is relatively unknown today. Indeed, even the controversial and



Charles Wilkes by Thomas Sully. Wilkes was a strict disciplinarian who ran a taut ship. He cultivated the image of a martinet to carry the authority that a young captain might otherwise have had difficulty in commanding. That Wilkes managed to guide the Expedition through awesome hazards, frequent privation, and occasional boredom is testimony to his considerable leadership skills. Courtesy U.S. Naval Academy Museum.

colorful Wilkes is remembered primarily for his role in the *Trent* affair during the Civil War, when he removed Confederate diplomatic agents from a British vessel in international waters.

The story of the Expedition begins in the early nineteenth century with John Cleves Symmes, Jr., a veteran of the War of 1812 from Ohio, who believed that the world was hollow and that the entrances to the inner world could be found by sailing to the South Pole. Known as the "Holes in the Poles Theory," it was not widely accepted even then. Nevertheless, New England merchants eager to find new sealing and whaling grounds

allied themselves with Symmes and his friends to encourage Congress to sponsor a South Seas Exploring Expedition. The U.S. Navy welcomed the opportunity to learn more about this little-known region and to show the flag in areas where natives had taken American property and lives and had gone unpunished. Thanks to these various interests and the encouragements of President John Quincy Adams, Congress in 1828 passed a resolution authorizing the president to send one of the public ships to the Pacific to examine coasts, islands, harbors, shoals, and reefs, if this could be done without a special appropriation.

*One of the new discoveries of the Expedition was the many-colored fruit dove from Samoa, named *Ptilinopus perousei* by Titian Ramsey Peale, who also produced the plate. Peale, son of the artist and museum founder Charles Willson Peale, accompanied the expedition as a naturalist. The plate shows a male from Samoa (bottom figure); unknown to Peale, the other two birds, collected in Fiji, belong to a different subspecies. From Cassin, Mammalogy and Ornithology atlas, plate 33. Courtesy Smithsonian Institution Libraries.*

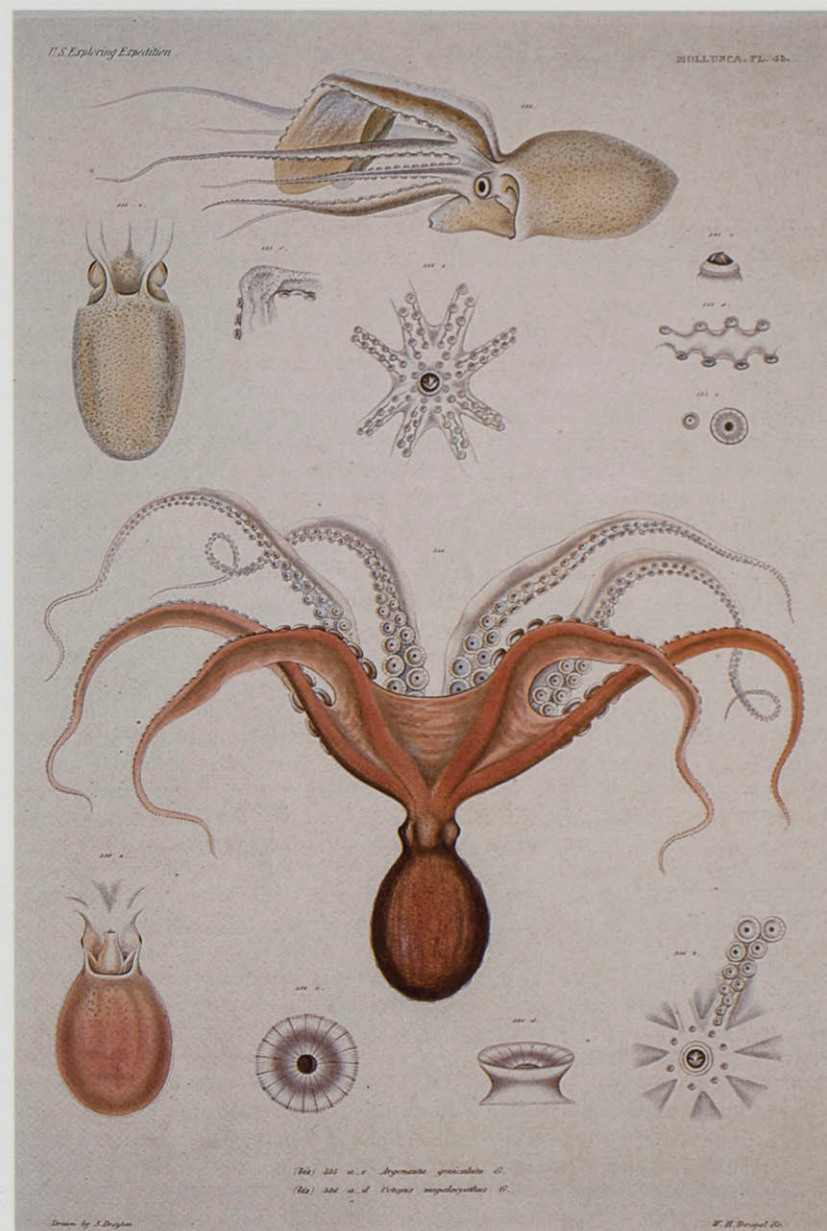


Soft-bodied animals such as these cephalopods not only were difficult to preserve in the field, but also were likely to be spoiled by evaporation of preservative while in storage in Washington. The original specimens of *Argonauta geniculata* Gould from Brazil and *Octopus magalocyathus* Gould from Orange Harbor, illustrated on this plate from the atlas of Mollusca, have disappeared since the return of the Expedition and can no longer be traced. Courtesy Smithsonian Institution Libraries.

Despite the resolution, however, ten years passed before an expedition set sail for the South Seas. Officially known as the United States South Seas Exploring Expedition, it was commonly called the Exploring Expedition or the Wilkes Expedition. One wit dubbed it the "Deplorable Expedition," because of the seemingly endless delays and controversies that surrounded it. For example, there were squabbles over the number and types of ships, the choice of commander and the scope of his authority, and the size and background of the scientific staff. Typical of the bungling that beset the Expedition was the indecision of Secretary of the Navy Mahlon Dickerson, whose credo was "Be cautious not to attempt too much business in one day." The general feeling of the American public about the venture was nicely summed up in 1837 by John Quincy Adams, who was now serving as a representative in Congress from Massachusetts. All he wanted to hear about the Expedition, he said, was that it had sailed. Six ships finally did depart Hampton Roads, Virginia, on 18 August 1838.

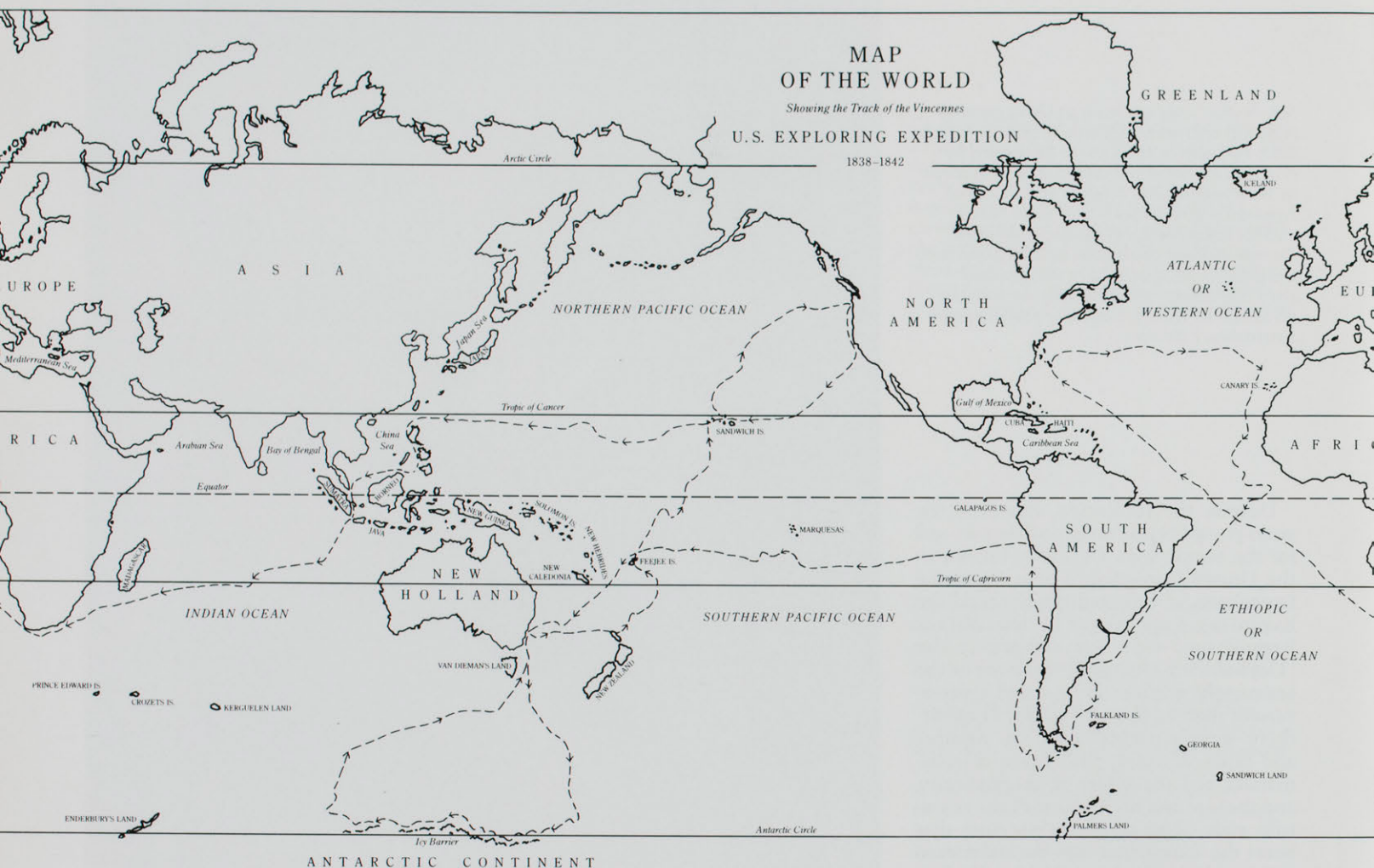
This was a young man's expedition. Passed Midshipman William Reynolds—an avid chronicler of the four-year adventure—wrote his sister that it was strange "to look around & find none but youthful faces among the officers—a Young Captain, with boys for his subordinates—no gray hairs among us, none of those 'hard a weather' characters... we are all in the spring time of life."

Wilkes commanded the squadron from the flagship *Vincennes*. Although not the navy's first choice to lead the Expedi-



tion—of forty lieutenants in the service, thirty-eight had had more sea duty—he had the vision, intelligence, and determination to do the job. He gave the Expedition its distinctive stamp. Aloof, stern, and resolute, he drove himself even harder than he drove his ships and men. His sense of mission and national pride dictated high standards of performance and accomplishment. Second-in-command, on the *Peacock*, was Lieutenant William Hudson. At forty-four, he was four years older than Wilkes and the senior officer in terms of service. The other vessels were the *Porpoise*, the supply ship *Relief*, and two virtually identical schooners, the *Flying Fish* and the *Sea Gull*. Modifications were made to most of the vessels to prepare them for the anticipated stresses of an expedition to polar waters and to accommodate the nine civilian scientists who sailed with the squadron.

Cut from a projected corps of twenty-five, the Scientifics, as the civilians were known, were essential to the Expedition's success. Their appointment marked the first time in American history that civilian and naval personnel combined their talents and resources in a peacetime scientific endeavor. Young—their average age was thirty-two—resourceful, and dynamic, most of them were academically trained; several went on to become giants in their fields. James Dwight Dana, the most gifted of the group and already the author of a major work on mineralogy, became one of America's most distinguished scientific leaders. The others were Horatio Hale, philologist; Titian R. Peale and Charles Pickering, naturalists; William D. Brackenridge and William Rich, botanists; Joseph P. Couthouy, conchologist; and Alfred T. Agate and Joseph Drayton, artists.



Map of the world showing the track of the Vincennes. Courtesy Smithsonian Institution Libraries.

Scientific, commercial, and diplomatic objectives may have dominated the Expedition, but traditional naval discipline and custom—including flogging and the regular issue of grog—marked its passage throughout the cruise. Brooding, aloof, and always fearful of cabals, Wilkes was a strict disciplinarian who ran a taut ship. He later admitted that he cultivated the image of a “martinette” because it carried with it “authority” and “obedience to command.” Doubtless, justice dispensed with a heavy hand contributed to the obedience that his command “induced.” Navy ship captains in 1838 could authorize a maximum of twelve lashes without benefit of court, yet Wilkes often ordered more, sometimes as many as forty. One sailor, Charles Erskine, who had sailed under Wilkes before and had been flogged by

him—unjustly, he avowed—later confessed that he planned to kill Wilkes during the Expedition but changed his mind after seeing a vision of his mother. Erskine told this story in his book, *Twenty Years Before the Mast*, which he published in 1890. Ironically, Erskine had learned to read and write during the Expedition. That Wilkes—despite his difficult personality—managed to guide the Expedition through awesome hazards, frequent privation, and occasional boredom is testimony to his considerable leadership skills.

Although denied a promotion to the acting rank of captain, which he deserved and expected, Wilkes nonetheless modeled his leadership on the precedents established by commanders of earlier overseas squadrons. From the outset, he impressed his officers and men with

the demanding character of their mission and the conduct he expected of them, especially in their relations with native peoples. His men were bound by strict security policies based on previous American experience in the Pacific, and the strength of the naval contingent afforded the Scientifics a degree of protection they perhaps did not fully appreciate.

It is difficult today to imagine the stresses of shipboard life in the age of sail. The ships were small and crowded and the time between ports often weighed heavily. Since the only way to keep meat and poultry fresh in the days before refrigeration was to keep it live, the decks the first few weeks after leaving port resembled barnyards, complete with the accompanying litter and stench. The problem became even more acute when departures were delayed because



the livestock usually remained on board even though, as Reynolds once grumbled, their "time would have [been] spent more profitably ashore." Exotic fruits, native dishes, and fresh fish and game occasionally relieved the traditional shipboard diet, but short rations proved inevitable on several occasions. Not much could be done to keep drinking water tasty, for it was kept in barrels and iron tanks and, as Peale wrote his young daughters, was "very warm and... smells very bad." Still, "as we do not come on board ship to be comfortable we content ourselves with anything we can get."

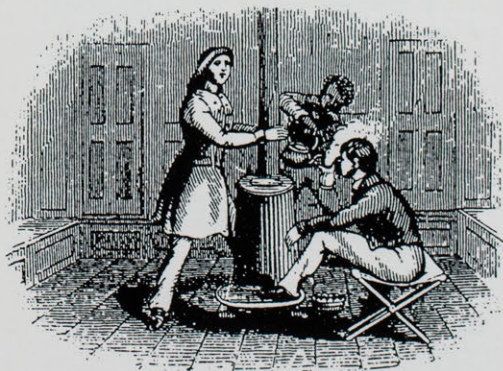
Peale seemed less "content" with his accommodations on board the *Peacock*. He went on to describe his stateroom as being about "as large as your mother's bedstead; in it I have a little bed over and under which is packed clothes, furs, guns, Books and boxes without number, all of which have to be tied to keep them from rolling and tumbling about, and kept off the floor as it is sometimes covered with water." Peale's comments in his journal were even more caustic: the ships were totally unfit for scientific service. Although staterooms had been constructed on the gun deck for use by the Scientifics, they were wet and dark and inadequate for making drawings or preparing specimens. The captain's cabin was the only appropriate space for such activities, but using it meant depriving him of privacy. They could not work on deck because of "the usual Naval etiquette," while lack of light and air prevented their working below deck. As it was, the Scientifics ate all their meals by candlelight because the officers' wardroom was below decks.

Reynolds, on the other hand, was delighted with his quarters aboard the *Vincennes*, which he shared with another midshipman. The two officers must have gone to great lengths to make their stateroom comfortable, for little in it seems to have been navy issue. White and crimson curtains hung at the walls, while blue damask dusters covered the two couches, which ran the width of the compartment. The couches served as lounges during the day and beds at night. The bureau had a "handsome" cover and the mirror was "beautiful." In addition, the stateroom boasted silver-plated candlestick holders, a "Brussels" carpet as well as soft mats, and an ornamental washstand which, in "its furniture, white sprigs of green & gilt...[was] in perfect taste." Completing the decor were bowie knives, pistols, and cut-

lasses" displayed in different places & figures [to] give the Man-of-War finish to the whole."

A homey decor was no substitute for news from home, however. When mail reached a ship virtually all activity ceased until the letters had been read and reread. Reynolds once reported his pleasure at obtaining American newspapers "less than 80 days old" from a ship that came into Honolulu from Mazatlan. The vessel also carried mail for several crewmen, which made them "the envy of all the squadron." On another occasion, only four months into the voyage, the *Vincennes* was hailed by a brig out of Boston that carried two letters for one of the passed midshipmen. His joy quickly turned to grief, however, because the letters informed him that his two infant children had died. The man's wife "even in her deep & heavy affliction had not forgotten to endeavor to afford some consolation to her equally bereaved husband," Reynolds wrote. At least three more years would pass before he could return home, "& then, when he seeks his children, he must know his way towards their graves!" In truth, for seamen and Scientifics alike, four years of absence proved an extraordinary sacrifice, depriving their families of needed support and making particularly bitter the official indifference that marked the Expedition's return in 1842.

Combining naval and scientific objectives was not always easy, but for the most part the two groups of men worked well together. The attitude of Midshipman Reynolds is probably typical of the naval personnel. "I like the associates we shall have during the cruise," he wrote home shortly before the squadron left the United States. "These enthusiastic artists, and those headlong, indefatigable pursuers & slayers of birds, beasts, & fishes & the gatherers of shells, rocks, insects, & c... are leaving their comfortable homes, to follow the strong bent of their minds, to garner up strange things of strange lands, which fact proves that the ruling passion is strong in life." A month later, Reynolds reported that the Scientifics had made "another haul." He considered it quite curious to see them patiently toil over seeming trifles, "giving up their whole soul to their employment." On calm days they would drag scoop nets behind the ship and then empty them on deck. Because the sea was teeming with life, they would find many things "minute & beautiful to look at, and having every thing that is won-



Life aboard a sailing ship, taken from *Thulia*, a poem about the expedition's voyage to Antarctica written by James C. Palmer, surgeon aboard the *Flying Fish*.

derful, in their character to hear of, by the aid of microscopes." Specimens the Scientifics considered particularly significant were immediately turned over to the artists, who copied them from life. "To watch them," Reynolds wrote, "is another source of gratification." On another occasion, after describing the method by which the Scientifics collected and dissected fish, he wrote: "All they did was Greek to us, but ...here's success to them, may they have a large book to publish when we return."

Even after a year at sea, Reynolds had not lost his initial interest in the work of the Scientifics. While in Peru, he shot a white egret, the only one of its kind that had been taken thus far. It had already been described in scientific literature, Reynolds wrote, otherwise the naturalists would have named it "Rinalditis" in his honor. "Mercy! only think of the Capes & Islands & mountains, that I shall call after the names of certain individuals [on the Expedition], having them all put in bold letters on that Chart, that will be a guide to navigators forever!"

Not all the officers shared Reynolds's admiration and enthusiasm. Some derided the Scientifics as "clam diggers" and "bug catchers." Others resented the additional workload they represented, such as the need to ferry them from ship to shore so they could collect samples of the flora and fauna from the islands the squadron surveyed. Even Wilkes was vexed by the noxious odors that emanated from dissected creatures and prohibited their study below decks.

The Scientifics had complaints of their own, of course. When the squadron was actively surveying the coral islands, Wilkes sometimes did not allow them enough time ashore to do their collecting, because of the need to keep on schedule. Indeed, Wilkes insisted that the surveying duty was "a service second to none in the Expedition." Couthouy, the conchologist, later complained that the Scientifics had gotten fifty thousand specimens in well-traveled Rio de Janeiro, but what they took from the first five unexplored islands they visited would not have filled a cigar box. The Scientifics suspected that Wilkes did not want their achievements to overshadow the Expedition's naval accomplishments. Dana, writing to Asa Gray from Valparaiso, congratulated him on his decision to remain at home, thereby escaping "Naval servitude."

Wilkes did give the Scientifics reasons for suspicion, because he zealously promoted the navy's interests and he personally took charge of the studies in the physical sciences. He later explained the

navy's role was not to be one of "hewers of wood and drawers of water." To Wilkes the Expedition was as much a matter of naval pride as national pride, and he overlooked no opportunity to enhance the navy's image, even to the detriment of the Scientifics if necessary.

One area of conflict concerned the ownership of the collection of specimens. Wilkes told the officers and crews that all souvenirs obtained during the Expedition were government property and would have to be surrendered at the end of the voyage. The crew blamed the Scientifics for this decree, although in fact the Scientifics wanted the assistance of the crew in making the collections more comprehensive and planned to pay for objects retained for the permanent collections. Regardless of fault, the question of keeping souvenirs became a source of needless resentment toward the Scientifics. As it was, private collecting seems to have been common despite the strictures against it. Midshipman Reynolds, for example, told his family near the end of the Expedition that although he had been unable to bring back a live bird for his sister, he did have a dead one with plumage so brilliant it "shall exceed that of any living warbler, in all North America."

Wilkes expected his officers to take their scientific responsibilities seriously. When he learned—"with surprise & regret"—that two officers had scaled the monumental Sugar Loaf mountain that towered over the harbor at Rio de Janeiro without taking instruments with them to determine "its correct admeasurement," he shamed them into scaling the peak again, this time lugging the proper apparatus, lest their effort result "only in the idle & boastful saying that its summit has been reached, instead of [being] an excursion which might have been useful to the expedition."

Midshipman Reynolds could have at times done with fewer scientific chores. While the squadron was in Rio, he had the unenviable task of tending the observatory that Wilkes established on an island at the harbor's mouth. "Every hour," Reynolds wrote, "I sally forth...and make the grand tour of the instruments: first a 'Barometer & Thermometer,' in the house, near the 'pendulum & clocks.' Then a diurnal variation machine, in a room alone; then the Tide Staff, then thermometer with black sheep's wool around the bulb, and another plain, both exposed to the sun's rays, 'to ascertain the solar intensity' then the Dip of the Needle; then two other thermometers in the air, but in the shade, then two other diurnal variation concerns and finally, a thermometer in the house—all these I

observe and note, at the expiration of every hour in the twenty four." To make sure he kept his appointed rounds, a marine guard had the duty of calling him every hour on the hour. "My time and rest are, of course, eternally disturbed."

Reynolds later drew the same duty in Peru, only this time he found himself and the instruments on a remote beach in an area frequented by bandits. He considered it "the most cut-throat spot...of the globe." Although Reynolds feared for his life, Wilkes evidently did not think it was necessary to station marine guards at the isolated observatory. Thus, Reynolds lamented, "I am alone." For protection he set his table across the entrance to the tent "as a sort of barricade" and kept a "huge" sword in his lap and two pistols on the table.

The first important stop for the Expedition was Orange Harbor at Tierra del Fuego, which Wilkes used as a base for his first attempt to explore the waters around Antarctica in February 1839. Leaving the *Relief* and the *Vincennes*, he took the rest of the squadron south. Peale, however, was the only Scientific to accompany Wilkes into Antarctica; the others remained in the area of Orange Harbor. Wilkes, meanwhile, was not having much luck. The weather was so bad the ships could not sail in company, and most of them returned without accomplishing anything. Wilkes, however, found enough indications of land to justify a more extended attempt the following year.

Wilkes planned to have the squadron reunite in Valparaiso, Chile, but only five ships reached port. The *Sea Gull* disappeared somewhere between Orange Harbor and Valparaiso never to be heard from again. After waiting several weeks for the missing vessel, the Expedition continued up the South American coast to Lima, Peru, where it prepared to head westward across the Pacific. Thus far, the Scientifics were generally unhappy because no new or unexplored places had been visited, and Wilkes was unhappy because he suspected several of his offi-

Continued on page 14

Page 13, right: "View from Sugar Loaf Summit, Rio de Janeiro." This exquisite watercolor by Lieutenant John Dale documents an incident that illustrates the scientific zeal of Wilkes, who reprimanded two Expedition officers for scaling Sugar Loaf without carrying along the instruments needed for taking the mountain's "correct admeasurement." The chastened young men climbed Sugar Loaf again, this time lugging the proper apparatus. Courtesy J. Welles Henderson Collection.



William Reynolds by an unknown artist. Reynolds was a young midshipman whose journal and letters home give a lively account of the Expedition. Reynolds distinguished himself by being, with another midshipman, among the first to sight land in the Antarctic region. He later became an admiral in the U.S. Navy, as did seven other young officers on the expedition. Courtesy Anne Hoffman Cleaver.

Magnificent Voyagers: The U.S. Exploring Expedition of 1838–42, which is jointly sponsored at the Natural History Museum of Los Angeles County by ARCO and Occidental Petroleum, opens June 6, 1987. The exhibition is being held in the Natural History Museum's Governor's Gallery and will appear there until August 30, 1987. During the run of the exhibition, the museum will be open from 10 a.m. to 5 p.m., Tuesday through Friday, and 9 a.m. to 6 p.m. on Saturdays and Sundays. Magnificent Voyagers was organized by the National Museum of Natural History, and traveled by the Smithsonian Institution Traveling Exhibition Service.



cers were plotting against the success of the Expedition. To get rid of the supposed troublemakers, Wilkes assigned them to the supply ship *Relief* and ordered it to return home by way of Australia, where it was to off-load supplies and equipment. Wilkes reasoned that the supply ship was too slow and would keep the Expedition behind schedule. This seems to have been a valid complaint, but the lack of a supply ship caused inconvenience and difficulties later in the Expedition.

In August 1839, after almost a year at sea, the squadron reached the first Pacific islands, the Tuamotu group. The main order of business was surveying, which Wilkes developed to a fine art, using the triangulation technique he had perfected during his earlier survey of Georges Bank. The squadron gradually worked itself through the coral islands—the Disappointments, Tahiti, Samoa—

completing its work by the end of November 1839.

By now the romance of the Expedition had begun to wear thin, and to add to morale problems, the explorers discovered that the islands were no longer the unspoiled paradises described by Cook and other visitors. Missionaries, a major presence everywhere in the Pacific, seemed bent on spoiling the good times the sailors had anticipated. The change, however, pleased Wilkes and his fellow officers because they expected it to mean fewer desertions.

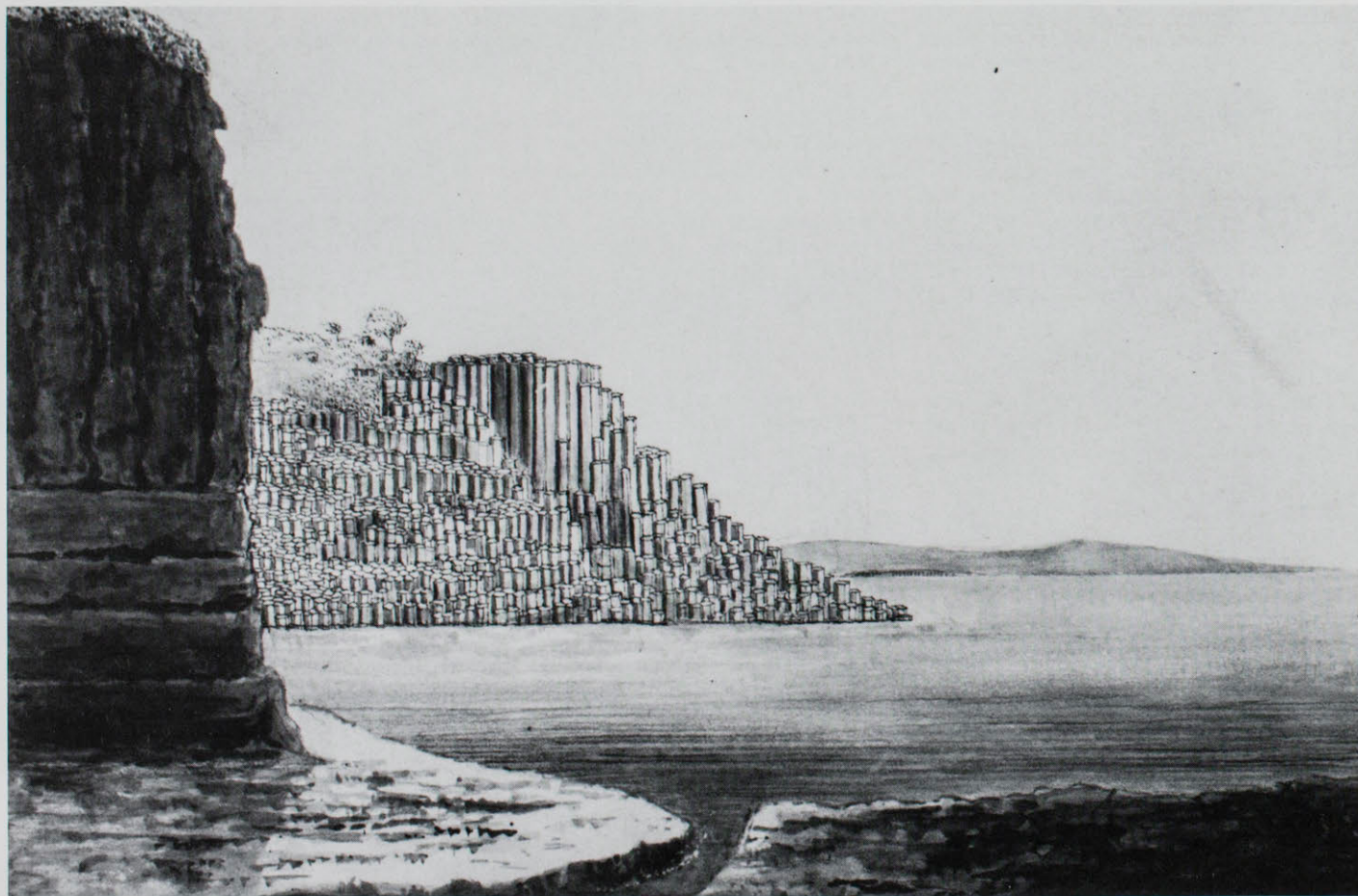
From Samoa, the squadron went to Sydney. Leaving the Scientifics to explore Australia and New Zealand, Wilkes took the remaining four vessels—the *Vincennes*, the *Porpoise*, the *Peacock*, and the *Flying Fish*—back into Antarctic waters. The Australians, for the most part, had not been optimistic, predicting the Americans would be “frozen to death.” Even Wilkes had his doubts, considering the lack of proper clothing and the poor condition of his ships, especially the *Peacock*, whose underworks were discovered to be rotted. Nevertheless, there had not been enough time to permit a major overhaul of the vessels, and four ships embarked for Antarctica on the twenty-sixth of December, 1839.

Part II of “Magnificent Voyagers,” which will appear in the July/August issue of *TERRA*, tells of the result of the U.S. Exploring Expedition’s voyage to Antarctica. The brave team chart hundreds of Pacific islands, witness cannibalism, climb to the top of Mauna Loa, and explore the mouth of the Columbia River in the Oregon territory before returning home after the four long years of their voyage.

Herman J. Viola is Chief Curator of the Magnificent Voyagers exhibition. In mid-1986 he was appointed Director of Quincentenary Programs for the National Museum of Natural History; the museum will begin celebrating in October 1991 the 500th anniversary of the discovery of America by Columbus.

Reprinted by permission of the Smithsonian Institution Press from *Magnificent Voyagers: The U.S. Exploring Expedition, 1838–1842*, Herman J. Viola and Carolyn J. Margolis, editors, Smithsonian Institution, Washington, D.C. The exhibition catalogue is available from the Natural History Museum’s bookstore or can be ordered from the Smithsonian Institution Press, Box 4866, Hampden Station, Baltimore, MD 21211. Cloth: \$39.95; paper: \$19.95, plus \$1.75 postage and handling.

Sketch by James Dwight Dana of basaltic columns in Illawarra, New South Wales, Australia. Dana was the intellectual giant among the Scientifics who accompanied the Expedition. His work on volcanoes and coral reefs, which the Expedition gave him many opportunities to observe, led him to become the most influential American geologist of the nineteenth century. Courtesy Dana Family Papers, Yale University Library.

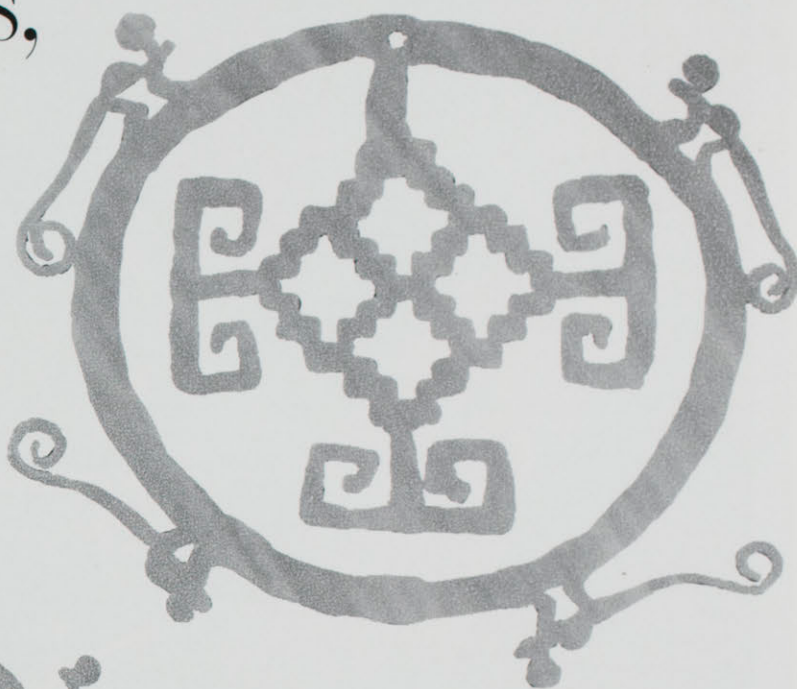
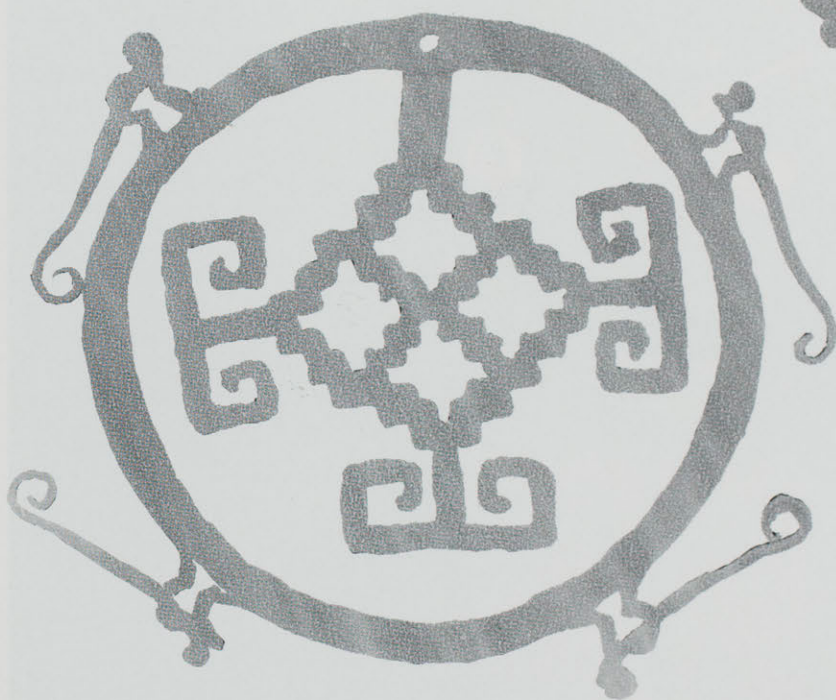


GOLD

Old World Riches, New World Symbols

by BRUCE OWEN

Photographs by Dick Meier



Pair of Ear Ornaments (Nariño Zone, Capuli Period, A.D. 800–1200, Northern Ecuador and Southern Colombia). Unlike the Tolima pectorals, these gold ear ornaments were cast in several pieces, which were then folded and hammered together. The figures on the outside are monkeys with long, curling tails.

A few hundred Spanish mercenaries dragged the New World, fighting and bewildered, into Western history for one reason: gold. Gold from the New World meant power and wealth for Spain; for gold, the far-flung civilizations of Mexico and Peru and the farming federations of Colombia and the Isthmus were destroyed utterly, shattered before the West even knew what they were, before their stories could be written, their lessons learned, their uniqueness appreciated and assimilated into the world that was to become our own.

Gold to the Spanish, and indeed to all of Europe, had value as a substance in itself. The shape it took might be curious or beautiful, but gold was meant for the melting pot, to be transformed into measured units of bullion or coin, into money and power. To the native people of the New World, gold was at once more prosaic and more profound.

Today we tend to forget that gold is a useful, easily worked material. Colombian Indians made and used gold fish-hooks as well as jewelry and grave goods; Indians from Mexico to Chile alloyed gold with copper and silver

to make sharp, hard-edged chisels for working wood. But the practical side of gold, even in the New World, was the exception.

In the complex states of the Aztecs in Mexico and the Incas in Peru, strict laws limited most uses of gold to the nobility. Gold jewelry was a sign of rank in Mexico; in Peru, the Inca himself ate from gold serving plates and drank from gold cups. The Muisca Indians of Colombia invested their chiefs in a ceremony legendary throughout South America, in which they painted their new leader, stripped to the skin, with sticky resin

Continued on page 18





Top: Figural Pectoral (Tolima Zone, South Central Colombia). Only one cache of Tolima gold has been excavated by an archaeologist; all other Tolima goldwork is looted. Consequently, the ages and cultural contexts of these pieces are unknown.

*Right: Alligator (Quimbaya Zone, Central Colombia). This famous, substantial pendant was stolen several years ago from the Museo de Oro in Colombia. It was recently recovered by Colombian authorities, and Museo curators slipped it into their loan for the show *Gold: The Quest for New World Riches* as an unexpected bonus.*

Page 16: Darien Pectoral (Colombia and Central America). This figurine is an unusually representational variant of a type of pectoral found throughout Colombia and into Panama, Costa Rica, and the Yucatán Peninsula of Mexico. The "telephone bells" may represent hallucinogenic mushrooms, and the figure may be wearing an alligator mask.



Votive Offerings (Tunjos) in a Pot (Muisca Zone, Central Colombia). Muisca tunjos were made specifically for offerings, often to be buried in sacred places as matching sets in little ceramic jars like this one.

Continued from page 15

and coated him from head to toe with gold dust. Gold in the New World was a prerogative of rank and a symbol of sociopolitical power; its meaning was in its use and form. Gold expressed status, rather than buying it.

But gold was not only an earthly symbol to the native Americans. In many New World cultures, gold was associated with the deified sun. The Inca ruler's right to gold derived not only from his secular power, but also and ultimately from his divine descent from the sun. The temple of the sun was the most sacred place in the capital of the Inca empire, and its walls were said to be covered with sheets of gold. Even today, to modern Kogi Indians in Colombia, gold is tied up with a constellation of concepts linking the sun, fertility, masculinity, and the power of life in general.

The Kogi are the descendants of the Tairona, one of the great goldworking cultures of Colombia, who were all but wiped out by the Spanish. Although they have lost the art of goldsmithing, they still treasure the scraps of Tairona gold jewelry that they saved from the Spanish almost four hundred years ago. The Kogi shamans who look after the gold are not wealthy men, and the reason might be a lesson for all of us in the modern, Western world. They say that gold is not owned by individuals, but, like the overarching power of the sun, it belongs to all mankind.

Bruce Owen, Guest Research Curator for the exhibition Gold: The Quest for New World Riches, studies anthropology at UCLA. All the gold artifacts featured in this article have been preserved for posterity by the Museo de Oro in Bogotá, Colombia. This museum has graciously loaned some of its most precious pieces to the Natural History Museum for its exhibition, Gold: The Quest for New World Riches.



THE ART OF BIOLOGICAL ILLUSTRATION

The Work of Frances Runyan

"I'm always thinking of something different," says scientific illustrator Frances Runyan, and indeed she has thought of enough projects to keep her busy well into the next century. "I'd like to do more butterflies," she says, "and a series of California's endangered plants."

Meanwhile, there are few natural and anthropological objects that the 73-year-old artist has not illustrated in her twenty-three years' service as a docent for the Natural History Museum, or for other institutions such as the Huntington Library, the Carnegie Institute, and for private collectors. From her first project for the California Cactus and Succulent Society in the 1940s, she has drawn illustrations of many botanical, paleontological, archaeological, entomological, and marine biological specimens and artifacts. Around 95 of these illustrations of narcotic plants, horse jaws, iridescent beetles, and microscopic isopods are on exhibit in the Natural History Museum's Director's Gallery from May 16 through August 16, 1987.

Frances Runyan is self-taught and has worked out her own unique illustration methods, some of which she teaches to the students of her scientific illustration class (which is held at the museum) and some of which she zealously guards. "I haven't told anyone how I do this yet," she said of an exacting pencil and watercolor method that she has developed, "but I hope to teach one of my more talented students someday." This watercolor and pencil technique accounts for the glossy texture of the *Ilex paraguensis* leaves seen on page 20; it helps in rendering satiny and velvety textures.

Artists' natural inclinations are often to embellish what they see, to improve on nature. Scientific illustrators must draw what they see, warts and all (or, in the case of the *Stapelia gigantea* on the next page, flies and all). Illustrators must judge what is important and emphasize the essential nature of their subject to communicate most effectively. They must be precise and patient as well as perceptive, because they often spend



long hours shading or stippling to bring a contour or a highlight out more effectively. When Frances Runyan began her first project, illustrating the Cactacea family, she often worked until 4 a.m. capturing every nuance of her prickly subjects. It is this attention to detail and penchant for keen observation that has made her constantly on demand by museum curators for the high quality of her work.

Scientific illustrator Frances Runyan at work. She is drawing an isopod leg for Dr. Richard Brusca, the museum's Curator of Crustacea. Photograph by Dick Meier.



Top left: *Stapelia gigantea* and flies, which pollinate the plant. For this illustration, Mrs. Runyan used a special watercolor technique that she developed herself.

Top right: *Ilex paraguensis*, which Mrs. Runyan illustrated using her special watercolor and ink technique. This illustration appeared in Dr. William Emboden's *Narcotic Plants*; the plate belongs to the Research Library's Botanical Art collection.

Left: A bullmouth shell (*Cypraea rufa*).

ECLECTICISM AND THE WELL-DRESSED GREEN

by WILLIAM BREEN



A trio of European greens that is becoming more widely known in the United States and is the basis of some truly eclectic salads.

From left to right: Arugula (*Eruca vesicaria* ssp. *sativa*), radicchio (*Cichorium intybus*), and mâche (*Valerianella locusta*). Photograph by Don Meyer; greens courtesy of Sidler Produce.

"Anything goes," wrote Cole Porter in 1934 and in that era, many Americans shrugged off the Great Depression blues by embracing the idea espoused in this song. They pushed it aside, however, when it found its way to the dinner table—especially if that "anything" was green. The red-blooded American husband tended to forget that the little wife might also be

longing for more meat and potatoes. "Rabbit food!" was the churlish comment should she dare to present him with a green salad. Vegetable tops fared even worse. Obviously cooked for about a month and served up in a sort of soup-stew, they provoked such sarcasms as, "you're sure I'll be able to chew this?" Rising tempers kept pace with the divorce rate.



"Bunch of cry babies! Counting the mice, we'll all be eighteen feet under one of these days." So grumbles Socrates in an authentic painting of the period. Question (answer true or false): Did Socrates quaff his lethal dose of hemlock—not from a cup but from a romaine leaf? See page 26 for the answer.

Happily, all that has changed. Today we know the value of healthful raw greens, and we also know that vitamins are lost through overcooking. Greens are exhilarating and needn't be despondencies such as iceberg lettuce wilting in watery mayonnaise. Horror of the 1930s, this salad was sometimes splattered with canned fruit cocktail as a special treat. Cooked greens have also left their watery graves and are no longer sodden masses suggestive of a too-long neglected goldfish bowl. "Anything goes" does go in the 1980s world of greens. Our choices are infinitely less limited, and our cooking is much more daring and inventive. What is involved here is an eclecticism that may soon come to be known as designer cooking.

World War II propelled us out of the culinary ho-hums when the boys came munching home with new food ideas gleaned from Europe, the Orient, India—from all over the world. The momentum for change accelerated to the point where, forty years later, fashions in food come and go as swiftly as do those in clothing. Cajun cooking is in one day, out the next. The despised meatloaf gets a Latin treatment and is suddenly the darling of the haute cuisine. Nouvelle is

old fashioned. The tired Caesar salad refreshes itself and moves uptown. All goes jetting by with dazing rapidity—and then is jettisoned for something newer still.

Let's think our way into a fine market, taking along this contemporary spirit of fun and adventure. The produce department has now become something of a maze. We find most of the world's cultivated greens spread out before us like a bewildering deck of cards. How do we play with them? What are some winning combinations? Everything answers itself if we just begin to design. Most of the greens are affordable, and the trendier ones are dropping in price as they become increasingly cultivated in this country. Remember always that any green worth its salt (or salt-free) is capable of standing alone. And, by the way, most greens are high in sodium. Low-salt dieters are advised to check their nutrition charts before pulling out all the stops in any edible leaf frolic.

We are going to begin with a sprightly quartet of cultivated greens. One, butterhead lettuce, is probably familiar to all of us. Three, arugula, radicchio, and mâche, perhaps are not.

The mother of all cultivated lettuces is

KNOCK-OUT SALAD

2 bunches arugula
2 small heads radicchio
2 good-size heads Boston lettuce
6 teaspoons lime juice
1½ teaspoons sharp creamy mustard
½ teaspoon sugar
salt and white pepper to taste
5½ tablespoons whipping cream
¾ tablespoons corn oil
Peppered Pecans (recipe follows)

Cut off the roots and any heavy stems from the arugula. Dunk repeatedly in cold water. Let stand in same for a moment and gently remove. If sand persists, rinse out bowl and repeat process. Spin leaves dry in a salad spinner, wrap in towel, and chill until serving time.

Remove white central cores from radicchio by cutting from base. Separate leaves and trim if necessary. Rinse, spin dry, wrap, and chill.

Separate Boston lettuce leaves, break into small pieces. Rinse lightly, spin dry, wrap, and chill.

In a small bowl whisk thoroughly the lime juice, mustard, sugar, salt, and pepper. Beat in cream; gradually beat in oil. Chill at least half an hour.

Arrange arugula, radicchio, and Boston lettuce in bowl; break up Peppered Pecans (see following recipe) roughly in halves and quarters and sprinkle on top of the salad.

Pour on dressing at the table, then toss lightly. Serve at once.

This will make four servings as a first course or salad. The pecan idea, although very New Orleans, is traceable to a 1570 Roman menu on which the cook of Pope Pius V included chestnuts prepared in a similar manner.

PEPPERED PECANS

In a cup mix 6 tablespoons of sugar with one-half teaspoon of coarsely ground black pepper. Reserve. Melt two tablespoons of butter in a small heavy pan and toss sixteen raw pecans in the butter until well coated. Sprinkle the sugar and pepper mixture over the pecans and continue heating and tossing until the sugar melts and begins to caramelize. It should spin a dry thread from a spoon. Remove from heat immediately and separate the pecans as they cool. Chill them on a small plate.

reputedly the wild lettuce *Lactuca serriola*, a member of the sunflower family. There are at least twelve species. Selective cultivation of this plant in ancient Asia Minor resulted in a more desirable lettuce known as *Lactuca sativa*. This plant is the real forebear of all our modern cultivars. These lettuces all have one thing in common: they are loose leafed in varying degrees of density, but at center all will be found to have a tight head.

"Butterhead" refers to a group of three lettuces that are horticultural varieties of the same species. This cultivar has small, loose heads and round light-green leaves so smooth and velvety that "butterhead" does indeed come to mind. Boston is the largest, butterhead the in-between size, and Bibb the smallest and greenest. Boston used to be cultivated on limestone for tender color and texture, and it is sometimes still called "limestone" lettuce. These lettuces are all characterized as "soft," meaning pleasantly unassertive in texture and flavor. These qualities make them a perfect foil for more firm and pungent greens.

Next in our quartet is arugula. The name of this green always reminds me of a song, which, as recorded by the Andrews Sisters, is now a hard-to-find

item for collectors of the bizarre. It has to do with the deranged life of Rosie, a dime-a-dance girl in Moscow. The name of the song is "A Ruble a Rumba," and the correct pronunciation of our green is "ah-ROO-guh-lah." The arugula rumba is not to be danced by any sane person.

Arugula is a green long cultivated and savored by Italians everywhere. It is now beginning to be cultivated extensively in this country, and more and more Americans are enjoying it. The leaves of arugula are so irregularly formed that, were they not beautifully beveled, one would think they had been nibbled in the field or en route to market. They are the green of Ireland, or ought to be, and the flavor is somewhat peppery, nutty, and mustardy. It is not overwhelmingly so, however, and once experienced easily arouses a craving for more. There is bite in its texture and taste, making it the perfect complement to butterhead lettuce.

Third in our quartet is a crunchy green with a bitter note. Don't anyone panic. We're talking zest, stimulation, and piquancy. Think how good espresso, the dark chocolates, Campari, and crème caramel are. Caught up with Europe, we're now talking chicories. Italy has for centuries been passionately in-

involved with one of them known as *radicchio* (pronounced rahd-EEK-ee-o), and this is the one worth chasing. It is a red chicory and has a tight head ranging in size from Bibb to Boston lettuce. As with other of its close edible relatives, the crisp leaves are distinctly bittersweet.

What emphatically sets radicchio apart is its truly smashing coloration. There are several varieties ranging in tone from deep burgundy through red and on to pink. Some are even beautifully variegated and may be swirled with green. The forebear of the entire group is probably *radicchio di Treviso*, which has been cultivated in Italy since the sixteenth century. The one we most commonly see in southern California markets is *radicchio rosso*, which is sometimes called *rosso di Verona*. The heads are small, red, and white ribbed. The shape lies somewhere between a cabbage and a cabbage rose.

It is easy to see why radicchio is now number one on the garnish leaf and salad-bowl chart. It is like a match set to a sky rocket. "Rocket," I'm pleased to note, is also another name for arugula. Shall we take off? Emphatically! We're going to do a knock-out salad that I call just that: "Knock-Out Salad."

Continued on page 26



The courtship of Juliet comes to a head as Romeo woos her with *un fiore che si mangia* —“a flower that is eaten.” He has thoughtfully pot-steamed the radicchio with herb- and garlic-accented olive oil. Obviously the Rose of Verona is delighted! Question (answer true or false): Did Romeo offer Juliet the superb radicchio known as rosso di Verona? See page 26 for the answer.



During the mid-1980s horticulturists succeeded in creating the fruits and vegetables in all manner of exotic shapes by placing molds over the plants' blossoms. Decorator colors were also achieved through whole-some coloring materials added during the growth period. In 1986 a team of scientists at the University of California San Diego announced the fusing of a firefly gene to the genetic material of a tobacco plant. This created a plant that literally glows in the dark. It is contemplated that this idea will be successfully accomplished with other plants and animals. In 1987, New Age think-

ing maintains that crystals are good for one's health, thoughts, and emotions. Well! Think about an esoteric blending of firefly and hummingbird genes with various nourishing crystals and fantastically formed and colored salad greens. From astral spheres comes this painting of the future depicting the results. The soft musical whirring of glowing humming-greens and crystals beckons the diners onward. Question (answer true or false): Are we looking at a salad of the future? See page 26 for the answer.

Wild lettuce (*Lactuca sativa*) is the forebear of all cultivated lettuces.



Continued from page 23

If you like creamy dressings and want a new green that is perfect for them, *mâche* (pronounced mahsh) is the one for you. It is again a green long beloved by Italians and, from a later date, the French. Catherine de Medicis may have brought it along to France. It grows wild in Italy and was cultivated in both countries from the sixteenth century on. It also acquired some chic and got to be known in France as *doucette*. But of course! *Doucette* is what French men call a sweet little thing. Since *mâche* looks like a dear and dainty bouquet of downy leaves, one follows the Gallic drift quite readily. It is also sometimes called lamb's lettuce, a translation of the ancient Roman *Lactuca agnina*. Everything about it is pastoral and springlike.

Cultivation of *mâche* in this country is moving fast, but most is still imported from countries where the delicacy required in packing it has long been known. It arrives, usually from France, and is sold in a clear twist of plastic—much as are flowers. Try *mâche* with our "Knock-Out Salad" dressing, using lemon instead of lime, walnut oil instead of corn, and, for a mild crunch, some chopped walnuts. *Mâche* has a delicately nutty flavor that this treatment will enhance. Be simple. Beets or mushrooms are also excellent salad ingredients with this green. Be sure to dress *mâche* only a moment before you eat it. This will keep its perky charm intact. *Mâche* is a good mixer too, so try it with other greens in a tossed salad.

We have left our cooked greens still boiling away in the 1930s. Apart from spinach, most Americans refuse to cook any greens at all—and certainly not the despised mustard green.

Common wild mustard greens (*Brassica*) are annuals native to Europe, North Africa, and Asia. From them comes our cultivated mustard family member *Brassica juncea* subspecies [ssp.] *rugosa*. The bitterness of these greens, which prevents most Americans from relishing them, is totally controllable. If you want

no bitterness at all and only a trace of mustard bite, blanch them in boiling water for a minute before cooking. Whether blanched or not, cook them in a nonaluminum pot until tender. This should take no more than fifteen minutes. Pot steaming, meaning in a tightly-covered vessel, allows the greens to retain all their flavor and color. Add no water save that which clings from their washing and (if desired) blanching. Serve them with a goodly amount of butter, salt, freshly ground pepper, or nutmeg and a few drops of vinegar or lemon. This is a down-home dish that has mere spinach beat a mile—and that's only for starters. Think of mustard greens with pasta and sausage, stewed with chili pepper and beef, puréed in glowingly green soups. Do look for those curly-edged emerald beauties. They are fun to design with.

Southerners know mustard greens well and do them up either separately or with collard (*Brassica oleracea acephala*). Collard greens are distinguished members of the Crucifer family; *acephala*, meaning "without a head," refers to their loose-leafed structure. The English name is derived from the Anglo-Saxon *colewort* or "cabbage plant." A heavy stalk and deep-green oval leaves contribute to the plant's sturdy appearance, making it easy to spot in the market. By the way, collard greens aren't bitter at all. They are wonderfully substantial and, in the soul food dish they are commonly associated with, delicious. To prepare this treat, just boil the greens with a bit of ham hock until they are soft. With a heftier quantity of pork, nobody will be displeased.

If overcooking is your *bête noir*, try this. Simmer your collards with raisins in a chicken broth seasoned with coriander and a little onion for fifteen to thirty minutes. The greens will retain their fresh, earthy flavor if simmered only to the medium firmness of cabbage. Toast some pine nuts in a little butter. Sprinkle them on the cooked collards along with

Answers

Page 22 (Socrates)

Congratulations. However you answered the question, you are correct. Socrates may or may not have downed the hemlock from a romaine leaf. The custom of using this long cup-shaped leaf as a receptacle for food and drink originated in the Middle East. The leaves are still used as little cups for the lemon and mint flavored bulgur salad known as tabbouleh. The Greeks scooped up food and drink in romaine leaves at little, early (before theater!) dinners. Later, the Romans adapted this prandial refinement and gave the leaves the name *cos*, meaning spoon. Thus we have romaine today sometimes called *cos romaine* or *cos lettuce*.

Page 24 (Romeo and Juliet)

Splendid! You answered correctly however you answered. The rosso di Verona was beginning to be cultivated during Shakespeare's time, but whether or not it was the rose that smelled as sweet under any other name can only be conjectured.

Page 25 (Salad of the Future)

The force is with you. Either true or false is correct when tuned in to such speculative radiance.

Common wild mustard greens are annuals native to Europe, North Africa, and Asia. From them comes our cultivated mustard *Brassica juncea*, the basis for many uniquely American dishes. Drawings pages 26 and 27 by Janice Fryling, used by permission of Stackpole Books.

the raisins and garnish with uncooked red summer currants. Imagine this presented on a dinner plate with slices of roast pork, chicken, or lamb, a happy mound of mango chutney, and some lightly curried rice. Very pretty and very good. This is a mere hint at the possibilities. Cheese, ginger, anchovies, garlic. Name it and it will fit into the design. Beef and collard casserole? You bet! Pork, ham, or chicken stuffed with blanched and chopped collards mixed with rice and shallots would be excellent. Aromatic spices such as ginger, nutmeg, or cardamom can also work magic on collard greens.

Back to the produce department where still other greens abound. They include at least two chicories. The first is the American endive, which has a curly, floppy head and narrow, crisp leaves. Belgian endive is the very desirable second chicory. It is compact, cigar shaped, and white from being grown in total darkness. Familiar to most of us as the best of salad greens, it is also excellent braised.

We also see lots of lettuces in the produce department. There's red leaf, red oak, green leaf, and our old friend iceberg lettuce. There is also escarole, a frizzy fellow that is a hybrid resulting from the crossing of loose leaf lettuce with curly endive. However, romaine is the lettuce we are saving until last to praise. Surely the aristocrat of them all, it was embraced by the aristocracy of classical Greece in the fourth century B.C. So effete had they become that they would have naught to do with any other salad green. However, Archestrates, a truly affected food writer of the day, declared: "Salads are fit only for the impoverished." James Beard he wasn't.

As for dressing that romaine, James Beard always recommended a simple vinaigrette as what any well-dressed salad green should wear. He preferred a good fruity olive oil, vinegar, and salt and pepper. Period. All important is that there be three to four parts oil to one of vinegar. Garlic if you like, some lemon,

some mustard, some herbs if you choose, but keep it simple. Beard called the fancy vinegars we now see everywhere "tricks." However, certain of these "trick" ingredients are themselves wonderful additives to simple green salads. This, needless to say, includes the ubiquitous raspberry. One should also make full use of flavoring greens and herbs. Nasturtium leaves, for instance, lend a pleasantly pungent shock to a summer salad.

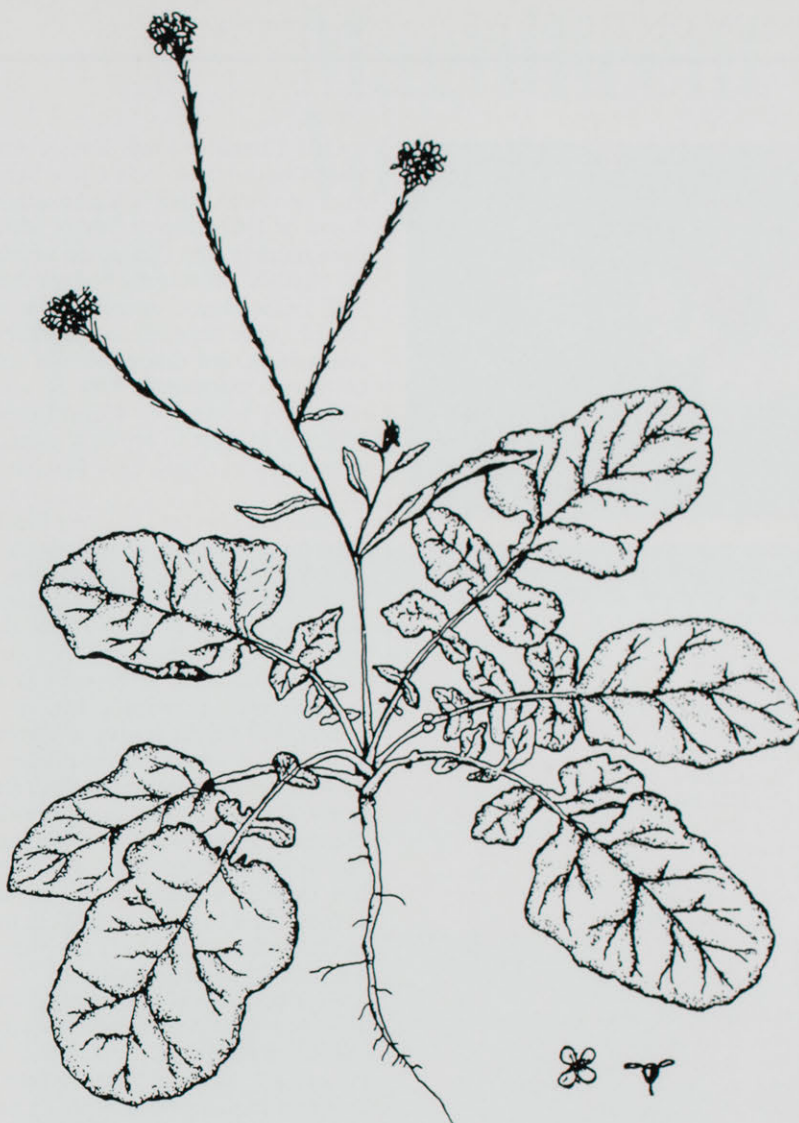
Let's go Roman with romaine and design a pretty Italian salad. We'll make a vinaigrette with balsamic vinegar and olive oil, a little grated garlic and some freshly ground peppers. Stir madly and salt to taste. Break up romaine leaves into bite-size pieces. Add to them julienned strips of prosciutto, chopped sweet yellow peppers, and toss with the dressing. Arrange a gently flattened mound of the tossed salad in the center of individual salad plates (oblong if possible). Put a stripe of black Italian olives along the back of the salad and ring the mound with small crumbly cubes of herbed goat cheese. Tuck the small ends of two whole romaine leaves under two

sides of the salad diagonally to the black olive stripe. Place a perfect bright-orange nasturtium at the base of each ear. Gorgioso! And all of it is edible.

You probably have seen lots of new baby greens in the finer produce markets. They are particularly lovely served in a salad with mâche. But all this salad is beginning to make us thirsty. What wine with that romaine salad? A Marzemino from the Trentino region of Italy is a good choice—so says Jean Walzar and she should know. Jean is a wine expert sans bunko. This dark wine has a merlot quality, little acid, and deep fruity tones with no sweetness.

Well, after so much abandoned laissez-faire, I could dance for joy. Since tarantellas are out, I guess I'll go stomp some grapes.

William Breen describes himself as a former fashion designer who is currently involved in writing and illustrating, especially as they pertain to food and wine. He has a business in wild edible mushrooms and enjoys devising menus featuring exotic fungi.





Dick Meier

Children visiting the museum view a model of the Great Bird Hall. More than \$1,800,000 has been raised for the construction of this new hall.

Mr. & Mrs. C. E. Ryker
Tani Sackler
Mr. & Mrs. Hyman Savinar
Mr. & Mrs. David G. Schmidt
Mr. & Mrs. Thomas A. Schupp³
Mr. & Mrs. Richard W. Schuur
Seaver Institute
Mr. Richard Seaver
Marc & Rita Seidner
Mr. & Mrs. Robert Shahin
Shea Foundation
Mr. & Mrs. William J. Shirley
Mr. & Mrs. Leon Singer
Dr. & Mrs. Robert Sloves
Mr. & Mrs. Mynatt Smith
Mr. & Mrs. H. Russell Smith
Mr. & Mrs. Russell Dymock Smith
Mr. & Mrs. Nathan Smooke
Mr. & Mrs. Richard Smooke
Mr. & Mrs. Jerome Sorkin
Southern California Safari Club
Dr. Norman F. Sprague, Jr.
Mr. & Mrs. Bennett Sprecher
Mr. & Mrs. Maurice H. Stans
Mr. & Mrs. Kenneth Steelberg
Stern Memorial Trust
Mr. & Mrs. James Stewart¹
Mr. & Mrs. Irving Stone
Mr. & Mrs. Norman Switzer
Mr. & Mrs. Vernon Underwood
Mr. Cornelius Vanderstar
Mr. & Mrs. Dwight Vedder¹
Mr. & Mrs. Raymond M. Veltman
Mr. & Mrs. Frank J. Vodhanel
Mr. & Mrs. Richard Volpert
T. B. Walker Foundation
Mrs. Martha Wallis
Dr. & Mrs. Gerald Winkler
Mr. Gin Wong
Mrs. Lillian W. Wyshak
Mr. & Mrs. Jack Young
Mr. & Mrs. James R. Young
Dr. & Mrs. M. Norvel Young
Mr. & Mrs. Evelle Younger
Dr. & Mrs. Norman P. Zemel
Mr. & Mrs. Robert Zukin

¹ Director's Council

² Curator's Circle

³ Sustaining Member

Otis Chandler Joins Native American Hall Committee. Otis Chandler, Chairman of the Executive Committee of the Board of Directors of Times Mirror, has been named Vice Chairman of the Natural History Museum's Native American Hall Leadership Committee. He recently joined other committee members, museum staff, and distinguished collectors of Native American arts at a cocktail reception hosted by Committee Chair William Mingst to preview plans for the museum's exciting new Native American Hall.

Museum Director Dr. Craig Black introduced preliminary drawings by award-winning designer Jean-Jacques André, which include a replica of a Pueblo cliff dwelling that will serve as the dramatic focal point for the space. As visitors circle the full-scale architectural habitat, scenes from the daily life of Pueblo people will appear within and around the structure: a small child will be dressed by her female relatives for her first Butterfly Dance; a display of textiles will illustrate Hopi weaving techniques and the symbolism incorporated into blanket motifs; a Zuni waffle garden will demonstrate both their skills in intensive agriculture and the reverence with which they regarded nature.

One of the top priorities in the Museum's Seventy-Fifth Anniversary Capital Campaign, the Hall of Native American Cultures is considered crucial to the museum's mission to serve all sectors of the southern California community. As the museum's audience grows to include more Hispanic families, they will have the opportunity to explore Native American traditions with which they share certain threads. In fact, according to Dr. Margaret Ann Hardin, Head of the Anthropology Section, the nucleus of the anthropology collections was provided by three Angeleno families whose heritage dates back to the days of Spanish land grants. And because more Native Americans reside in Los Angeles than in any other city in the United States, the hall will directly reach the people whose culture it illuminates.

Bird Hall Funding Exceeds Half-Way Mark. John F. Harrigan, Chairman of the Natural History Museum's Great Bird Hall Committee, has announced that more than \$1,800,000 has been raised in support of the proposed \$3.5 million complex, one of the key goals in the museum's Seventy-Fifth Anniversary Capital Campaign. Dr. Ralph Schreiber, the museum's Curator of Ornithology, anticipates that work on the hall will begin this spring, when 75 percent of the total funding has been achieved.

The campaign for the Great Bird Hall is the first modernization of the museum's bird exhibition area since the 1950s. The 9,000-square-foot space will combine innovative exhibition design, state-of-the-art computer technology, and current research findings on ornithology to create the most advanced ornithology installation in the world.

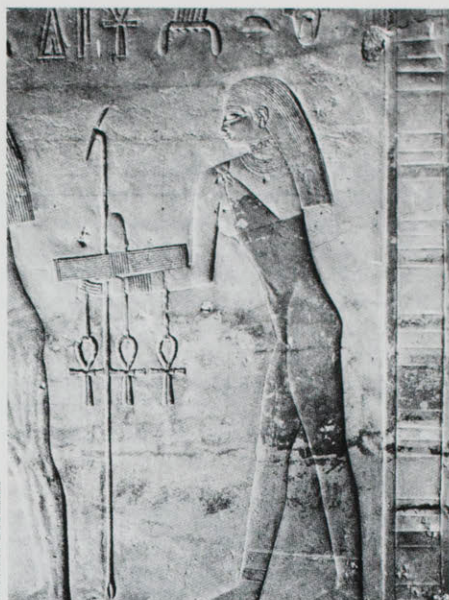
The preliminary model by Promotion Products, Inc., of Portland, Oregon, focuses on four areas. Visitors will enter the hall through the Birds of the World Gallery, where over 500 species will be mounted in a room reminiscent of a library—warm, comfortable, and relaxed. An interactive videodisc system will give visitors access to an encyclopedia of information as well as film footage of representative species.

In the adjacent Miracle of Birds room, celebrity comic Jonathan Winters supplies the voice of the animated Professor Percy Pelican, who lectures visitors on "What Is a Bird?" The main hall features exhibits on avian biology emphasizing the questions that have long intrigued humankind—how do birds fly and how do they live? Visually dramatic interactive displays illustrate bird anatomy, the relationship between function and form, the aerodynamics of flight, the mystery of bird navigation, and the striking diversification of birds as species have evolved to exploit varying ecological niches.

These exhibits provide the essential factual context for the culminating experience of the Great Bird Hall: three full-scale walk-through habitats that employ animation, sound, light, and even smell to create the illusion of living natural environments. As sunset fades to evening over a marshland pond, a flock of waterfowl veers against the sky and a mother goose shields her goslings from a predator raccoon. On a rocky cliffside, California condors cluster around their kill—a poignant reminder of the disappearance of North America's largest bird. A tropical rainforest comes alive with the calls of parrots, whose brilliant colors contrast with the green foliage.

Throughout these habitats, as well as the entire hall, visitors will be encouraged to participate in the process of discovery. As Dr. Schreiber points out: "By drawing upon a wide array of exhibition techniques, from mounted specimens to the innovative interactive videodisc system to the animated habitats, the Great Bird Hall will enable the general public, professional ornithologist, amateur birder, and sportsman alike to benefit from one of the largest and most comprehensive bird collections in the world."

BOOK REVIEWS



Werner Forman

Wadj-Wer ("Great Green"), a semi-divine being from the pharaoh Sahure's cult temple at Abusir. Fifth Dynasty.

IN THE SHADOW OF THE PYRAMIDS: EGYPT DURING THE OLD KINGDOM by Jaromir Malek, photographs by Werner Forman, University of Oklahoma Press, 1986. Cloth, 128 pp., \$22.50.

The monuments of Egypt's Old Kingdom (c. 2658 to 2135 B.C.) are well-known to most of us. The pyramids, and the temples and tombs that surround them, have filled both visitors and native Egyptians alike with awe and wonder for over four thousand years. It was a time greatly respected and emulated by the Egyptians themselves in later centuries. But for all its legendary grandeur, surprisingly little is known about the Egyptians of the Old Kingdom and apart from what has survived in stone, our knowledge is scant. Furthermore, there is a scarcity of available material for the nonspecialist. For both of these reasons, this volume is welcome.

Ancient Egyptian civilization began well before the Old Kingdom. Before the styles of art familiar to us became set in stone, so to speak, many of the artifacts looked quite different from what we usually recognize as Egyptian. What these unusual pieces do exhibit is a lively style and the great artistic skill that existed before 3000 B.C. That high degree of craftsmanship especially remained a hallmark of ancient Egyptian art.

It was in the Old Kingdom that the power and position of the king became more than it would ever equal again, even in the great days of Thutmose III

Continued on page 30

Magnificent Voyagers

EXHIBITION POSTER AND CATALOG AVAILABLE

This special exhibit examines the scientific and maritime accomplishments of one of the most remarkable voyages in the history of exploration: The U.S. Exploring Expedition, 1838–1842. Pictured is a beautiful exhibition poster reproducing an oil painting attributed to Charles Wilkes of the flagship *Vincennes*. Also available is a 300-page extensively illustrated catalog. Use the handy mail order blank below or visit the Museum Bookstore for a wider selection of related merchandise: T-shirts, ship models, scrimshaw reproductions, and more.



Quantity	Price	Amount	Name _____
	Poster 8.00		Address _____
	Catalog 19.95		City/State _____
	Subtotal _____		Zip Code _____
(Museum Members only) — 10% disc.			Telephone (_____) _____
	Subtotal _____		(Daytime)
(Calif. residents add 6½% sales tax)			☐ Check or money order
+ Sales tax _____			☐ VISA ☐ MasterCard ☐ American Express
Poster—postage & handling + 3.00			Account # _____
Catalog—postage & handling + 2.50			Expiration date _____
			Signature _____
			(as on card)
		Grand total _____	

Poster and catalog must be mailed separately.

MUSEUM BOOKSTORE
Natural History Museum
900 Exposition Boulevard
Los Angeles, CA 90007
(213) 744-3434

and Ramses II. Pharaoh was the son of Re, the sun god, and his great pyramid tomb was for his afterlife with the gods, an afterlife afforded only to royalty. The surviving texts and the few pieces of funerary art attest to this. And while the many tombs of his officials and other followers that surround him depict almost every aspect of daily life, we see only royalty in the company of the gods.

We must remember that the tombs were those of the upper classes, and it is they who have left most of the material remains for us to study. What we do see of the life of the lower classes is depicted mainly on the walls of the tombs of the wealthy. The rich feasted on cakes, beer, wine, beef, fowl, fish (though ritually impure), and (great favorites) onions and garlic. They owned estates and held positions of prestige in the government. They lived well.

But changes were in the wind. The great cults of the dead kings, with their massive tombs and their temples, priests, and feasts, taxed the economy as more dead rulers were added to the list to be cared for. There may also have been a famine to add to the stress on the country.

But another change ran deeper and had a more lasting effect. During the Fifth Dynasty (c. 2465 to 2322 B.C.), an ancient deity in the form of a mummified king and known as Osiris increased in importance. He slowly became the chief god of the netherworld and by the time of the New Kingdom (1550 to 1070 B.C.), he was worshipped by royalty and common people alike and all, not just royalty, could hope for a place in the next life.

More interestingly, and perhaps with greater importance for civilization, was the concept of morality associated with Osiris' cult. One's moral achievements in this life determined one's place in the next, and as we know so vividly from later texts and tomb paintings, the righteous survived and the wicked perished—in a lake of fire, according to the *Book of the Dead*.

In the *Shadow of the Pyramids* is a well-written and interesting book. For the person who has read little about ancient Egypt, it is a good overview of an important period. For the more knowledgeable, it also has much to offer in its arrangement of the main parts of the culture into a clear and cohesive picture. It does not present the march of history contained, for instance, in the appropri-

ate chapters of the *Cambridge Ancient History*, but this is not the real purpose of the book and makes it, I find, more interesting. The book is divided into ten parts and also includes a chronological chart, a short bibliography, index, and

endpaper maps showing important sites and monuments. We are even told, when they are known, the ancient names of the towns and eighteen of the pyramids.

I would take issue with one point: the author seems to play down outside influ-

The Mysteries of Heaven and Earth

LITHOGRAPHED IN FULL COLOR SIZE: 18 × 24 INCHES* READY FOR FRAMING



"A New Perspective on Life"

Brilliant, mysterious images of authentic lunar samples. Bold, graphic portraits of everyday insects—frozen at 150 times their normal size.

For the first time, these unique images—captured in incredible detail through the "magic" of microscopy—are available as gallery-quality posters. And only from Omega Graphics.

These *Alien Jewels* and *Micro Monsters* posters are one-of-a-kind images that are as fascinating as they are beautiful. And they enhance a wide array of settings from contemporary to high-tech, to, well... dormitory chic.

Order now. And put the mysteries of heaven and earth up for all to see. The *Alien Jewels* and *Micro Monsters*. They'll give your life a whole new look.

FILL IN ORDER BLANK BELOW - DETACH AND MAIL

SPECIAL MEMBERSHIP OFFER

PLEASE ☒ ☐ Crystalline Fantasy, *Alien Jewels* and/or ☐ Super Fly, *Micro Monsters* POSTERS

NAME (print): _____

ADDRESS: _____

STATE: _____ ZIP: _____

MAIL TO:

Omega Graphics U.S.A.
P.O. Box 4001
Palos Verdes Peninsula,
California 90274-0297



NOTE: POSTAGE AND HANDLING INCLUDED

I have enclosed a check or money order for _____ Posters, 18 × 24 Lithographed in Full Color, Ready for Framing at our Special Membership Offer of only \$10.00 each.

If mailed to a California address add 6% sales tax.

Please allow six weeks for delivery. Deliveries only to the U.S.A. and territories.

Discounts to volume distributors available. Inquiries invited.

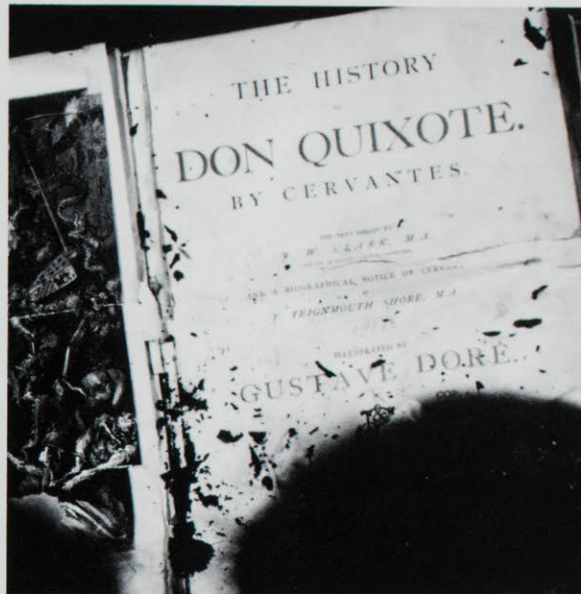
ences on Egypt's early cultural development. Egypt was indeed isolated, and the indigenous culture was intensely vigorous. But as we learn more from digging in the Near East, we find that there were more contacts than we thought. Trade, accompanied by some rudimentary record keeping, may go back beyond the eighth millennium B.C. or even before, and Mesopotamian influences are in evidence in a number of examples: cylinder seals, boat types, animals with long necks intertwined, architecture decorated with niches, wavy-handled pottery, and perhaps even writing itself. But the uniqueness of the Egyptians translated these foreign influences so quickly and so completely into purely Egyptian forms that they lost all identification with anything alien.

The photographs of *In the Shadow of the Pyramid* are, happily, of high artistic and technical quality. Ancient Egypt is a visual experience—tombs, monuments, reliefs, paintings, and even the writing system. Pictures of people at their daily tasks over four thousand years ago cannot fail to move us. These scenes as depicted in their tombs do indeed give them a sort of everlasting life, and we travel half way around the world to visit them. Who wouldn't like to know Ptah-hotep or Princess Neferiabt? And who, upon visiting their tombs at Saqqara, doesn't greet them as old friends?

Jay Bisno
Curatorial Assistant
Archaeology

MOUNTAIN LIGHT: IN SEARCH OF THE DYNAMIC LANDSCAPE by Galen Rowell, Sierra Club Books, 1986. Cloth, 240 pp., 80 color photographs, \$35.

Long-time members of the Natural History Museum will remember Mountain Light, a remarkable exhibit of photographs by Galen Rowell of some of the world's highest peaks, which appeared in the museum's Director's Gallery in early 1985 (TERRA, January/February 1985). Now Sierra Club Books has published a breath-taking collection Rowell's vistas of K2, Mount Everest, the sheer granite spires of Canada's Northwest Territories, and, closer to home, Washington State, the American Southwest, and Yosemite. No one who yearns for high and wild places will want to be without the luminescent and awe-inspiring images presented in this book.



Please be part of the effort to replace books burned in the April 1986 fire at the Los Angeles Central Library.

Send your tax-deductible contributions to:
Save the Books Campaign
P.O. Box 1986
515 S. Flower St.
Los Angeles, CA 90071
Phone (213) 486-2140

TAKE A SAFARI WITHOUT LEAVING TOWN

You don't need to venture to Africa to see hearty hippos, extraordinary elephants and roaring kings of the jungle. And you don't need to fly to Australia to enjoy a close-up view of koalas and kangaroos. The most exotic wildlife in the world can be found in your own backyard—at the

Los Angeles Zoo. You'll see more than 2,000 mammals, birds and reptiles in natural settings for one low admission price. So visit **The Great L.A. Zoo** in Griffith Park, and see the wildest animals in the world for peanuts.



KRISTALLE

Wayne and Dona Leicht, 332 Forest Avenue No. 8,
Laguna Beach, Cal. 92651 (714) 494-7695 ... 494-5155
Open Mon.-Sat. 10-5.

photo by Harold and Erica Van Pelt, Los Angeles

All specimens shown
are for sale ... subject
to prior sale.
Prices on request.

